



# HEARTS OF IRON III

## Supplement to the Strategy Guide

Recc. of Maj. Edwin Hanks, ADC, Col. Renssler  
Rev. 1, v1.1c, 23 August 2009

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## Foreword

No, I am not a Major, nor am I a Colonel. I am Edwin Hanks, who is Rensslaer on the Paradox Forums. So if I'm not a Major or Colonel, what qualifications do I have? Well, I was author of the HOI 3 Strategy Guide, and I'm a longtime student of history, international relations and military affairs. That will have to do.

This Supplement exists because there were aspects to understanding Hearts of Iron III and the necessary strategies which could not be predicted in advance so that they would be available for release with the product. The "patching" process, of fixing bugs and tweaking combat values, was still underway, and I could not guarantee major changes wouldn't be implemented in the final days. There also have been other things that have become apparent in the few days since HOI 3 was released. Those discoveries and analyses exist here, within this Supplement, which should be available to all registered owners of HOI 3. I would ask players not to distribute it beyond this set of people, because it is a copyrighted work. Though it is my creative work, Hearts of Iron is woven throughout, and so the copyright resides with Paradox Interactive. You get to deal with their lawyers, not mine.

Since this is my own work, "supplementary" to the actual Strategy Guide project, Paradox is not obligated to provide support, such as translation, etc. If some kind soul would like to volunteer to translate this Supplement into other languages, I would be happy to lay it out and publish it as a PDF for readers of that language.

First, I didn't get to add my list of appreciation to the Strategy Guide (production was rushed, and the thanks got repeated from the Manual). I'd like to thank several people who have assisted me in the process of compiling the Manual, the Strategy Guide, or this Supplement. In no particular order, I appreciate your help: PaxMondo, Lothos, Darkrenown, Letar, Pal, SA\_Avenger, Potski, Peekee, Piggy, TheLand, Safferli, CyberMajestic, Vladislav, Marshman, Maximillian I, KonigMaximilian, Luka, 2Coats, Kriegspieler, DHarper, Gormadoc, Zwi-back, SirGrotius, RHALX, Aphrochine, Deathn, DvD-IT, Hessler, Gen.Schuermann, Silktrader, Markusw7,

Juv95hrn, Burning, Arnehome, Karaya, Barkhauer, Zaki, Blue Emu, Hallsten, Veldmaarschalk, and OHGamer, as well as Johan, King, Chiwiss, Besuchov, Podcat, Doomdark, Susana, Fredrik, Lena, Boel, Jeanette, Ryan and Christian at Paradox. If I've forgotten somebody, as I'm sure I have considering the immense amount of work, the duration of the project, and the fact that many important contributions are not all that obvious, please forgive my oversight. I appreciate everyone who contributed to making HOI 3 such a great success!

Special thanks also to my wife, who has had great patience with me while I spend long nights working on this project!

## Extra Considerations

### ERRATA & ADDENDUM

This is where I'll mention things that belong in the Strategy Guide but were not included, either because of oversight, or the rush to produce it, or because things have actually changed in the month since the Guide was turned in for layout and production. This version of the Supplement will cover v1.1c, but also may anticipate some changes likely to be implemented in v1.2.

### "The Rensslaer Paradigm"

I did mention at one point the "Rensslaer Paradigm", which I said "should work in any Paradox game". Actually, I should have said "in any Paradox Game besides HOI 3!" It is a method of using naval combat rules and attrition strategy against a superior naval power with the goal of gradually reducing the enemy's superiority. Basically, you would fight until the enemy loses a major fleet unit, and then retreat before they could destroy an equivalent ship on your side. Truth be told, it does actually still work, but HOI 3's disengagement rules grossly complicate it, so it's not as useful. The critical hit rules also make damage far less predictable, and therefore further lessens the tactic's utility.

## MPH vs. KPH

There are places in the text and graphics of the Manual or Strategy Guide where “miles per hour” are mentioned, and other places where “kilometers per hour” are mentioned. At some time between when the Manual started to come into being, and when it was ultimately finalized, a decision was made to switch from MPH to KPH. Any references to MPH should be considered to refer to KPH instead. The exact distances or speeds should not matter so much as their values relative to each other.

## Speed of Strategic Redeployment

At one point, Strategic Redeployment was referred to as costing fuel rather than supplies. Strategic Redeployment does not cost fuel – it costs additional supplies. It also reduces organisation, and may also cause the unit to have an attack delay. At another point, Strategic Redeployment was said to move units at a speed of 20 times the infrastructure of the province, which is incorrect. These units move at a speed of 20, which is applied differently depending on the infrastructure of the province (just as with any other unit’s speed).

## Day & Night

Whether it’s night or day doesn’t matter as much as I suggested in the Strategy Guide because battles are longer and your battles will average out over time. In this respect, day and night becomes more of a tactical consideration, below your level of attention. Nevertheless, if you have the freedom to make a choice, it will benefit you to wait until daylight to initiate an attack (especially air or naval attacks) because it will cause your average combat hour to be more weighted toward daylight, and therefore give you that much more advantage.

## Submarine Combat

There was some confusion over whether submarines conducted combat “on map” or “off the map.” Convoy attacks take place off the map. Submarine versus ship combat takes place “on the map” like other ship combat, but submarines may have a special positioning bonus because of their special capabilities.

## Attack Delay

In the days before release, the figures for “attack delay” – the amount of time after a unit wins one combat before it can attack again – changed, causing the delay to be longer. This impacts breakthrough strategy some, but not as much as you might imagine. It simply has the effect of slowing breakthroughs down somewhat, but these delays can also work against a mobile defense. The principles used in breakthroughs remain valid.

Also consider the effects of attack delay upon any units you use for “reconnaissance by fire.” You may not be able to mount an attack with those divisions until their attack delay has passed. However, if your reconnaissance reveals an opportunity to attack, why not just leave them in combat and bring more units to join them?

## Air Intercept

A forum user asked a question about “seeing the air raids on the map” which drew a reply and clarification from me. In HOI 2, air units moved at one province per hour (turn), so you could see them coming. In HOI 3 this isn’t possible, not only because there are more provinces and it would become increasingly unrealistic matching aircraft speed to a single province per hour, but also because it was really somewhat unrealistic in HOI 2. So now aircraft have a speed, and if they can cross 3 provinces in an hour, they do so.

Your trick to intercepting is either to have air superiority missions waiting when they get to their target (i.e. figure out where the enemy would probably attack, and protect it), or have fighters set to the Air Intercept mission – the bombers will hit on hour one, and stay through 4 hours (a total of 4 hours), which means your air units set to intercept will arrive and start fighting the enemy bombers for the 2nd, 3rd & 4th hour, even if they were 3 provinces away when the bombing started.



## A Clarification on “Pinning” or “Fixing”

I may have been unclear as to the number or degree of strength you should commit to “pin” the enemy in place. The illustration on page 56 of the Strategy Guide shows just one division doing the pinning because that’s the best “economy of force” -- the other divisions have a more important mission, and so they can’t be spared to pin. However, on pages 40 and 52, I show multiple divisions combining in pinning attacks for better odds. Economy of force should always be your rule – if you’d rather sacrifice one unit in order to slip 4 more behind the lines, then do so. But if you have enough units to do so it’ll always be preferable to attack with your maximum available.

## Effects of Low Organisation

If your ships, planes or land units have very low organisation, they will be unable to move. This threshold may be different for different types of units (i.e. ships may become unable to move at higher organisation levels).

## Naval Pinning

Because of the effects of low organisation, it’s possible to “pin” an enemy fleet in a province, or in a port. Just reduce the organisation of one or more ships in the fleet below the level required to move. The AI may or may not figure out that it can sacrifice that ship, by detaching it from the fleet, in order to move the rest of the fleet. If it takes a while for the AI (or even your multiplayer opponent) to realize this, then you’ve effectively pinned that fleet in place.

## Resource Transport

It was apparently unclear what happened with resources as they were being delivered to the home country, either from outlying provinces, or from trade. All resource convoys bring resources to a port connected to the country’s capital. Once they reach the capital, they can be converted to be used to support the country’s industrial capacity (IC).

## Air Attacks & Stacking Penalties

It may be necessary for me to further illustrate how stacking penalties affect the use of airpower. It’s true from the dynamics of the penalty system that you will reach an “optimum” result from airwings if you commit five or six airwings (see chart). But that’s a useful figure only if you’re considering the benefit to a single province. If you take the whole front into consideration, where adding

Airwing Effectiveness (stacking penalties)		
# Wings	Penalty	Effective # Planes
1		100
2	10%	180
3	20%	240
4	30%	280
5	40%	300
6	50%	300
7	60%	280
8	70%	240
9	80%	180
10	90%	100

5-6 units in a single province may add to your combat results slightly, you will face diminishing returns. Whereas if you use two sets of three airwings, instead of one set of six, you’ll actually get a more effective combat result across the whole front (i.e. you get the effectiveness of 480 aircraft – 240 x 2 – rather than only 300).

## Naval Operations

You won’t be able to pull your ships out of combat as neatly as might have been presumed. They will have to withdraw on their own, based on localized cues, like too much damage, or the fact that they have thin-skinned hulls and shouldn’t be in combat in the first place (transports, carriers, etc.).

But once the battle is over, it’s important to do after-battle housekeeping. Take your most damaged ships – those that probably won’t survive another combat – and if they can be spared (if they’re not doing something of utmost importance), send them back to base to repair. Don’t just take ships that have suffered strength/hull damage – also withdraw those units which have low organisation, because they’ll be useless in combat anyway (but if you send them back to base, they’ll repair to nearly full strength in a much shorter time than hull-damaged ships).

## Gaming Intel

There are ways to trick the AI (or even an unobservant multiplayer opponent) into not realizing your troop strength along the border. You can move to one province behind the front lines, where the enemy has only level 1 intelligence in-



stead of level 3, and park the units there until you're ready to move. Use the shift-rightclick move command, making sure to set a coordinated arrival time for every unit just before you want to launch your attack. Any unit, upon arriving in a front line province, can begin attacking immediately, and so you just wait for the moment when they pop in, then pause the game and issue attack commands across the entire front (or if you're in Multiplayer.... just hurry!). Obviously, this doesn't work if the enemy has radar, which is another good reason for you to have radar stations (signals intelligence) on your front lines.

Naturally, you should be on the lookout for tactics of deception such as this.

## Intelligence on Installations

A recent change has made it so you must search for installations within enemy territory. This is more realistic, of course, but makes things harder for you. Knowing the installations present is dependent upon your intelligence level on that province, which means radar stations (signals intelligence) become much more important and useful.

Your aircraft get intelligence on territory as they fly over, which is good. Coastal provinces can be checked

out by ships, if you're willing to risk them. Keep in mind that installations are often clustered around places where major cities are, and that resources (which you can see on the resources mapmode) are located in the capital of each region, which is where you'll find the major cities and probably the installations. Be smart about how you search for enemy installations, and remember that a clever enemy may use reverse psychology on you to try to hide his most important sites.

## Trigger Points

You may have a border that's remained relatively quiet, because neither side really had the strength to move forward, not to mention both sides are dug in till you can't see anything but helmets bobbing around.

If anything changes – if the enemy suddenly decides to hit one of your dug in units along this border – check to see if you have an opportunity to hit them on their flank. Often, once the enemy has committed himself to one battle, that means he can't hit elsewhere. Not in strength, at least. So you may feel enabled to hit the enemy's flank, and inflict a huge negative penalty for multiple combats.



The quiet front opens up. Both sides were dug in until one side decided to press the issue. Now that the Germans have attacked Gen. Ridgway's 82nd Airborne division (the paratroops in the middle of the shot), they've committed themselves to an attack directed due east while at the same time giving up their entrenchments. There's no longer any reason for Gen. Hobbs (slightly to the north) to remain entrenched, so he gets to take advantage of the situation by flanking the German attack and adding a -50 multiple combat penalty.



## Starting Technologies

There is a feature which randomizes starting technologies for each country, to some degree. Some techs are set in the scenario file, others are assigned according to that country's levels of practical knowledge, and can be different from one game to the next.

## Shortening the Front

The idea of shortening your lines is not as simple as the number of provinces you have along the border. This is

an “economy of force” thing. The more provinces you have near the enemy's borders (not necessarily touching), the more forces you have to keep around on defense.

And so if you can push the border away from a whole region of the map, you make it so you have “your back to the wall” (i.e. no one can slip behind you), and you can move all those defensive units forward to be used either on offense or as front line defenders.

Borders with neutrals can be useful “terrain” features if you know the enemy isn't willing to invade them too. Think back to when we were talking about defensive terrain, and then look at the screenshot below.



Tibet, to the north, and Yunnan, to the east, are both neutral. So presuming you can count on the Japanese not attacking them in order to go through their territory (a safe bet at this point), then you can attack Burma in the north, retake it, and turn your armies south. This has the effect of shortening the border itself from four provinces (the numbered ones) to two. Additionally, any units in the northeast corner of India can be moved south to join all of your units in the north along that 2-province defensive border. This shortens the Japanese lines, too, but if you have the power to push them back this far, I'm betting you have a stronger balance of divisions here – enough power to push forward and keep going to the south, especially since you just relieved some of the pressure on your own units to the south of you.



## Stacking the Production Queue

Remember, even if you don't have the IC to produce them all at once, it's okay to "stack up" your production queue. Here's an idea – things like atomic reactors and rocket test platforms take up so much IC that it's really, really hard to convince yourself to make room for them in your budget. Why not put one or the other of them at the end of your queue (for a prewar game, anyway) and when your units finish their production run your excess IC – the stuff you had working on those items – will go toward the "big ticket item." Always keep it at the end of the queue, and move your priorities ahead of it. These things don't always need to be fully funded – they're there to soak up your excess points until you have time to reallocate them. Someday, they'll get built, even if you never made a conscious decision to concentrate on them. The same concept might work with forts, with a little more bookkeeping.

## Advice From Players

I also want to point you to some sources for strategy advice on the Forum. There are several people who have posted particular strategy insights, and some who have posted a number of valid points – the gift of insight into strategy is a relatively rare one, so find these people and listen to them. Kanitatlan, for instance, has done some serious mathematical analyses for HOI 2, and I'm sure he will do so again for HOI 3.

ExMudder (Keith Bennett from Palo Alto, California – not a Beta), for instance, had an insight on training laws for units – gaining experience up front probably isn't worth having fewer units because you're training them longer (build times higher). He observes that speed of production from practical knowledge is more useful than the law anyway, so it's often a bad deal to increase training times because it counteracts the practical knowledge benefit and causes you to have fewer units, which can be a relative disadvantage in the long run. In a separate observation, he points out that while regular armour (medium armour) is a better combat unit than light armour, there is an advantage to combining light armour and armoured cars (or even mechanised infantry perhaps), because they have a higher speed than regular armour, and in HOI 3 speed determines a player's ability to exploit breakthroughs.

On the HOI 3 General Discussion Forum, you'll also find a thread by GreenMarine (Propaganda and You: A Strategy Guide) which is a fascinating analysis of the HOI 3 concepts of threat and neutrality, and how to use your Espionage and Diplomatic tools to influence the course of world events. The forum user 515Pat has a General Discussion thread (Japan Starter Guide) which offers an able analysis of how to play Japan from 1936, and other users offer valuable constructive criticism in that thread. Other strategy experts will tend to congregate in these threads, and just watching the give-and-take can be a worthwhile education. Be careful accepting advice from just anyone – I've seen some really bad advice from forum users too! But experience will allow you to evaluate how talented someone is, and how useful their suggestions might be. Other forum users will be quick to point out flaws in suggested strategies.

Don't underestimate the power or importance of AARs (After Action Reports) for understanding military strategy in practice. Myth, for instance, has begun an AAR showing how Italy might incorporate theories of military strategy into HOI 3 conquest, and others, including myself, will be running AARs exploring the practical application of strategy in HOI 3. These AARs are located in a special section of the Paradox Forum – look for the "HOI 3 – AAR" link.



# Special Reports

## WHITE PAPERS ON SPECIAL SITUATIONS

### Penetrating Multiple Layers

In the Strategy Guide I described the process of breaking through a defensive line, and also described the strategy of “defense in depth,” or multiple defensive layers, which will generally prevent a breakthrough, at least on the short term. But an enemy whose defense is deployed in depth is not invulnerable. It just takes a strategy and careful application of the assault on the lines.

The way to break through multiple defensive layers is, simply enough, multiple breakthrough forces. Have some serious reserves nearby. About what you would use for a breakthrough, but multiplied by 2 or 3 times.

Your first step is to launch a thrust, just as you would for a standard breakthrough attempt. Pin the flanks, around where your thrust is entering, destroy the defenders in your target province, and advance into the hole – again, just as you would with a normal breakthrough.

Your problem is that you’ll face another wall – another defensive layer – so you can’t advance forward, like you might be able to with a single defensive line. Sometimes, if you haven’t had intelligence behind the lines, this may be the first time you realize there’s more than one layer. That’s okay too, because you had another wave ready to push through the hole and exploit the enemy rear area, right? Now, instead of becoming an exploiting wave, those divisions become the support units for your second phase.

The trick is to not lose that province you advanced into, and then to insert a “wedge” into that hole so that you can start applying leverage to expand your salient. Those battles on the flanks of your hole – the ones you were using to pin the enemy forces – now need to expand into full-scale battles. And now that you occupy this newly occupied province, you need to push enough units in there to begin flanking the defenders to either side as well as to continue pushing forward in the direction of their rear area.

One thing to be sure of is that you’re the one who attacks each of these provinces first. That’s probably not difficult to arrange, since most all the enemy units nearby are either already in combat or are retreating, but if the

enemy successfully attacks you (say from the 2nd defensive layer, if they’re willing to give up their entrenchment) in the province where you just advanced (a spoiling attack) then it could hold up your entire operation – those units will be pinned there in one battle, and if you’ve got enough units there to be attacking in 3 directions, you’re going to suffer higher stacking penalties. On the other hand, if you flank the defenders to the right and left of your thrust, by joining an existing battle from a different direction, and if you also launch forward into the next province (or the next two provinces, since you may well face two additional bordering provinces once you advance), you can actually have an enormous number of divisions/brigades stacked in one province but with no stacking penalties, since they’re divided into 3 or 4 different battles.

The reason it’s important to expand the salient is so you have room to assemble enough units to perform all these tasks. Your thrust must have a width of two or three provinces, rather than just one. Only at the tip – the “point” of the spearhead – will you advance into just one province, trying to extend your breakthrough past the second defensive layer (and eventually the third, etc.).

The enemy units you’re defeating will be pushed back, and will help to form more defensive layers behind where you’re trying to advance. But, if you really did a good job against them in your initial battles, they’re not going to be as strong as they need to be to effectively mount a good defense unless you give them time to recover. Unless the enemy had other units just hanging around, they’re probably going to have to pull units from their deeper rear areas to try to stop a concerted thrust. Or else they will have to pull units from either side of the breakthrough attempt.

Consider leaving some of your fast or armoured units out of the combat altogether (leave infantry if you don’t have spare mot/mech or armour). Not only will they perhaps be useless if they move in – adding to the stacking penalty and perhaps getting stuck in the reserve anyway – but they will have the attack delay applied to them. Wait until the battle is won, and then move them into the province just captured. They can attack and begin the next phase of your advance as soon as they arrive in the new province.

Every battle is different, and every commander will react in a different way. It’s possible you will throw everything you have at the full depth of the enemy, and will come away defeated and exhausted – that is, natu-



rally, the desired outcome of defense in depth. But if you have staged enough divisions nearby to try to exploit the attack, there's a good chance you can insert your wedge, exert leverage against the flanks, push through two or three defensive layers, and eventually come out the other side having exhausted all the defenders so that they can no longer form effective resistance to you. Once you've broken through that many defensive layers, there's not going to be much else to oppose you, and you would have "rolled up" the flanks of the front line (pushing them back in opposite directions, like opening twin gates in a driveway). The units that no longer have anyone to fight, because resistance has been ground to dust, now become your exploiting force, and will eventually become the elements of your new front line deep inside enemy territory.

## Gradual Constriction

With some countries and/or on some fronts, the balance of troops is just too high to "mass" a number of divisions to prepare for an offensive. Everything you have is spread out along a front line that's stretched tight, and there's no one to spare. The Japanese frontier with China during their war is like that at times.

In these cases, even if you have a victorious battle, you have to be careful who you send to advance into the province because only one province no longer fronts to the enemy, and all the others still need that division to stay, or else we've just opened a hole in our lines.

So what do you do? There's another principle that's kind of a mixture between standard attrition warfare and the breakthrough strategy. It borrows elements of the strategy for multiple defensive layers just discussed.

Attack your enemy at his weak points – where you would normally direct a breakthrough attempt. But when you "break through" advance what you can into that province. Frontiers like this are pretty well balanced. If you have one division per province, and so does your opponent, then their ability to dislodge you is not very high either. True, the province you just took over is probably more exposed than your advancing unit's previous position.

But you've also probably exposed one or more of the enemy's provinces that wasn't so exposed before. And it's this leverage that you need. Put that wedge into the hole, and start trying to force it open. Use extra divisions

if you have them – on a balanced front, just one extra division may work wonders.

To keep going with this strategy, you'll need to have "the initiative" – a nebulous concept that basically means the enemy is reacting to your actions, and not the reverse. If the enemy ever gets an idea of what you're doing, he might well try doing it back to you, and he can put the front back where it was, or move it to his advantage. But so long as he's reacting and retreating, he's not going to be able to collect himself enough to turn the tables on you unless you make a mistake.

Gradually pry open a hole, enlarge it, and keep moving into it like a slow-speed breakthrough. This may take months to fully develop. But at some point, one of two things will happen. Either the enemy will begin to make a strategic withdrawal from the provinces inside the pocket you're creating, or you'll successfully tighten the noose until you can actually break through to your forces on the other side, leaving the pocket surrounded.

## Peekee's Guide to Going to War

Betatester Peekee (Alan Riddell, from Edinburgh, Scotland -- erroneously noted as being from Canada in the Strategy Guide) has developed this handy guide for getting your country prepped for war as early as possible, using all the tools at your disposal.

*For any country starting in 1936...*

**Pause** (before playing a single day you should get some things set up)

**Leadership:** Put all leadership into spies on the tech tab (just for now!). This is to increase the spies in your country to level 10 as quickly as possible. After a couple of days it will ease off (see below).

**Espionage:** On the espionage page make everybody other than your own country priority 0. Your country should be priority 3 (green). You're putting spies in your country to lower neutrality.

**Laws:** Going through the politics page you probably want to lower everything (further down the screen) as far as it can go. Apart from a) industrial policy which should be at consumer goods while you are at peace and b) training laws which you may want to put to minimal training to build your first couple of units so you get some more practical skills quickly.

**Ministers:** Try to avoid ministers that lower IC. Otherwise, lowering neutrality is a good idea as it increases IC and reduces supply consumption. If you know you want to focus on specific types of units, ministers that reduce theory decay for those units are good.

**Production:** Some countries start building ships. If you don't want those ships or are not planning naval dominance stop building them. Adjust your sliders to meet CG need. If you start with dissent then have some extra in CG to lower dissent. For most countries you will not be building anything for the first couple of weeks. Also it is a good idea to let your IC stabilize from changes to your laws and ministers.

#### *Start playing:*

**Adjust:** Once your laws and ministers start to work, you will want to readjust your production sliders to meet CG need etc.

**Trade:** If you have a huge excess of Energy, Metal, supplies or Oil then try to trade them. Trading to countries in your continent is best as it uses no transports. Different countries want different things.

**Leadership:** Once you have 10 spies in your country you should stop putting all your leadership there. The chances are you should put nearly all of it into research. Some countries start with a very low officer percentage and may want to put some leadership into officers.

**Technologies:** Research ones you are sure you want. Start with the ones with the lowest "start-dates." Or techs that will give important benefits soon. If you have limited leadership you should focus on specific areas.

**Production:** Once your CG needs have settled down you should be able to start producing units. A couple of points. a) For most main countries if you just build infantry you will run out of manpower. b) If you have lots of spare resources and war is a long way off then consider building IC. c) Reserves cost less IC to build and less CG to maintain, however they will be more vulnerable if you are attacked and cannot mobilize in time.

**Position:** Moving supplies over long distances uses up supplies. By moving some troops back to your capital or nearby you can save supplies.

**Organize:** Reorganizing the structure of your army can have benefits. Typically you should be able to disband a couple of HQs saving you CG and supply costs for them and getting manpower back. Also by placing all units in a hierarchy you will be able to further reduce supply costs.

Finally consider placing leaders with logistics traits further up the command hierarchy to cut supply costs even further. (Once at war don't forget to replace them with leaders with good combat traits though).

*After a while* (basically watch the alerts and wait for a war):

**Units:** Place your new units into your forces.

**Laws:** Watch for any new laws you can pass.

**Intelligence:** You may wish to send spies to a foreign country to raise their threat so you can declare war.

**Diplomacy:** If you are a faction member, you may want to influence countries. This will use leadership per country influenced, so will require a drip of leadership.

**Decisions:** Keep an eye out for available decisions.

**Counter Intelligence:** You may get a lot of foreign spies in your country. You can see this most obviously by looking at the tooltips on your research in the technology screen. If you have a big reduction in research speed then consider moving the spies in your country to counter espionage. After a few weeks you should have caught the foreign spies and can go back. Some countries such as France and the USSR start with low national unity. Higher unity is required to pass better laws so you may also want to switch over your spies to increasing your unity.

#### *Prepare for war:*

**Troops:** As war gets nearer you should move troops, ships, planes, etc. to places they are likely to be needed.

**Mobilization:** In general you should not mobilize as it will vastly increase your CG demand when at peace. The one exception is if there is a country which has a very high threat to you. In that case the CG demand should be a bit lower and having stronger divisions may be very useful.

#### *Once at war:*

**Readjust Laws:** New ones will be available. You will also want to move away from consumer goods now.

**Assign Combat Leaders:** If you have better leaders with combat traits, replace logistics ones.

**Intelligence :** You no longer will need to lower your neutrality. Focus on counter espionage

**Ministers :** You should consider replacing ministers with peacetime bonuses for more combat focused ones. If you have a silent lawyer replace him as you no longer need to



lower neutrality.

**Officers:** Now that you have the best recruitment laws you get the most officers from your leadership. If you have low leadership now is the time to quickly bump it up closer to 100%. (Low officers means units shatter more quickly).

**Production:** Reinforce, and upgrade. If you have reserve divisions that need reinforcing then that should be a high priority for your production sliders.

## D-Day! The Normandy Invasion

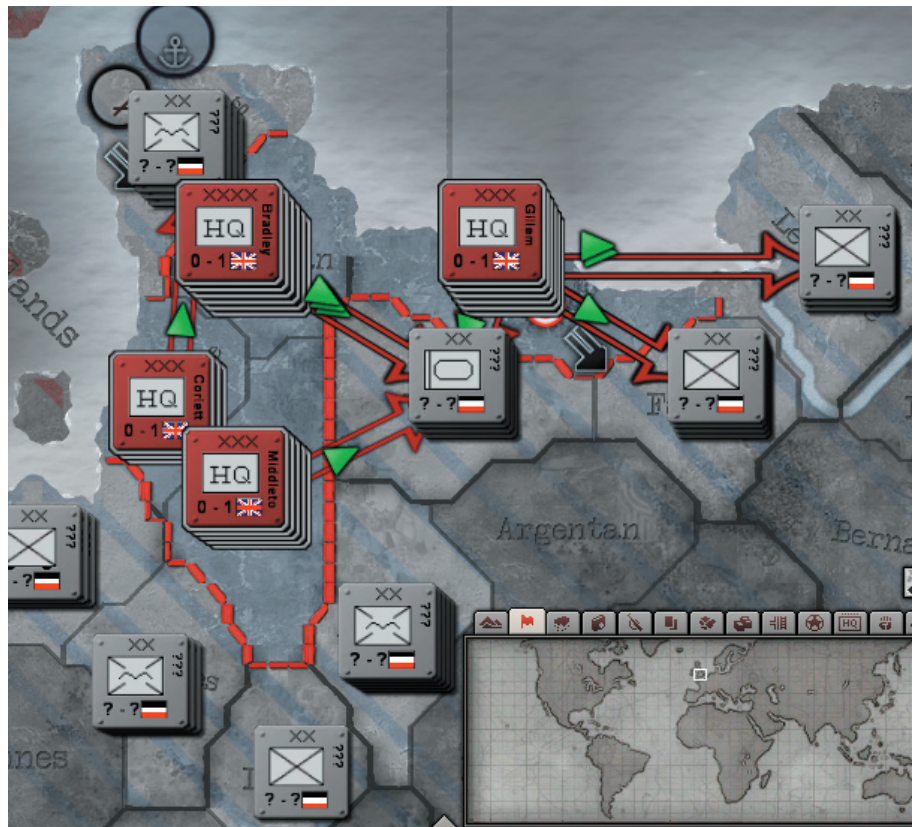
The 1944 Normandy scenario in northern France is one of the toughest battles the USA/UK will face.

**Editor's Note:** Though this is subject to change in later patches, you may end up having to play UK in order to control the units in the Normandy Beachhead. If you want to play as US, your choices are limited -- the best choice is to have the UK return the US expeditionary forces, play as UK for a month, and then switch countries from a savegame after the US forces are released. The drawback to this option is that the AI controls the USA until then.

The Allies start this scenario in an “established position” – that is to say they’re not in immediate danger of being pushed back into the sea, and they actually have a considerable force on the ground there. On the other hand, this is not a defensible position on the long term. If you don’t expand from this beachhead, you’re eventually going to be either militarily defeated, or starved out. So you must advance.

The immediate temptation is going to be to concentrate on capturing the port at Cherbourg. Fortunately, you can do this, but you must plan carefully to avoid losing your primary goal because you’re fixated on a secondary goal.

Why is Cherbourg a secondary goal? After all, it’s your only way to provide long-term supply to your beachhead. Because it’s a supporting goal – obviously the primary goal is (and must be) to push the Germans back and retake France.



The first thing you should do is figure out who’s attacking Vire. This is the key to your whole situation, because it’s an “exposed” position, and because you can open an offensive on three separate frontages (which means a combat front of 20, minimum). This province also ties up three of your bordering provinces, and if you take it you shorten your defensive line, which makes your position more secure.

You’ll need to decide who’s attacking out of Mortain. I’d recommend using your mechanised infantry, because this province is primarily going to remain in a defensive stance. The other divisions have good defensiveness, whereas your mechanised has good toughness too, which means it’s likely to do better on the offensive. You could add one other division if you want, but this is a supporting attack and you’re only going to have a frontage of 5 to play with. You need two or three divisions to remain still, digging in, because this is your most exposed province. Same with your divisions in Granville – “dig-it-deep” defense! Granville is not as exposed as Mortain, but holding it defensively prevents a “turning” of your flank.

Divide your divisions in Carentan between a northern attack upon Cherbourg and a southern attack upon Vire. Divide it about half each. Make sure your armour is heading south. You don’t want tanks fighting

in urban terrain, which is what Cherbourg is. You'll need tanks in the southern thrust anyway, once Vire falls.

You have enough divisions in Caen to attack in three directions at once, and I recommend you do so. Divide your armour between Vire and Falaise, half and half. There's an SH-Armour brigade hanging about. I'd normally advise you to attach it to a division, but you don't want to slow any of them down. Just do the math and throw it into a battle after all the frontage is taken.

Your attack upon Le Havre should be comprised of paratroops and motorised because they have to cross a river and motorised and paratroops have the least penalties for that. Send the rest of your motorised against Falaise. Consider using shift-rightclick to set them to attack a few hours late – that way you ensure these will be your reserve, and not some key armoured division you'd rather have in the front line! You don't have to leave anyone behind to "watch the fort" because you're attacking all adjacent enemy provinces – throw everyone you've got into the battle.

I hope it goes without saying that no HQs should be sent anywhere. They should sit quietly where they are – use them to run your battles, not to run into them or away from them.

An alternative breakout strategy might be to push south into Laval, and some players may see that as a good idea, though I doubt it would work. It appears to be lightly defended, but you're attacking on a narrow front (you can only attack from one province) and it's vulnerable to flanking attack from three provinces other than your target province. That's a recipe for disaster unless you can spare the units to pin the other provinces. But that weakens your main attack. It's just not likely to work.

Likewise, some players might try a breakout to the west, maybe even ignoring Le Havre and shifting the whole concentration of the breakout attempt one province west. However, this divides your forces too much, and would result in more attacks at worse odds. Most of your units are in Caen, and you should really make use of that concentration of strength. You could try shifting units around, but you don't have time for that – you've got to get out of this enclave as quickly as you can.

The final alternative is to have all of your divisions dig in and let the Germans exhaust themselves trying to push you into the sea. I would not recommend this because you're giving the initiative to your enemy, and I'm not so confident they won't succeed in trying to kick you out of France if you give them a chance! I've watched the

AI try this, and they died horribly by the end of July.

Your airpower is good, even if it's all in southern Britain – it's still within range. Move your battleships into the Channel to support with shore bombardment.

Set your strategic bombers to either pound German airfields, or to make ground attacks on the troops surrounding you. Why use Strategic Bombers against troops? One, they're still effective against troops, even if that's not their primary role. Second, there's not a lot else to use them for that isn't a distraction from your goal. Yes, you could use them for strategic bombing in Germany, but you actually need all your airpower focused on your immediate goal right now. Eisenhower used B-17s in Normandy – so should you. Why not hit the German infrastructure immediately behind the lines, and try to put them out of supply? Because you need that infrastructure to make your breakout. However, you could start infrastructure bombing about 4-5 provinces back from the front.

Use one air unit of 4-5 airwings to fly air intercept cover over the battlefield. You could use a second to patrol on air superiority if you want. Don't have them on the same mission, or they'll trip over each other and cost you stacking penalties. The air cover units should be set to patrol a cone starting in Cherbourg and stretching over all of your units and reaching into the front lines of German units. Alternatively, you could set two air units to do air intercept over different regions. If you have a massive 10-airwing air unit, break it up and use it separately.

Use your tactical airwings and some or all of your multi-role airwings to make ground attacks upon the eastern wing of targets – one unit of four or five airwings each at Vire, Falaise and Le Havre. Any more than that and you'll start to lose effectiveness due to stacking penalties.

I personally recommend setting all bombing or close air support attacks to take place only during daylight hours, but this is a matter of taste. There are some serious penalties for attacking at night, but you will still get some benefit from it. Only long term playtesting will determine what's best for both, the ground battle and the survivability of the air units.

The Germans in Vire are going to face a serious attack on two fronts, combined with a supporting attack on a third. They should collapse quickly. As the dominoes start to fall, expand. Prepare more divisions to cross to France once you've expanded your beachhead. Push east along the coast to open more ports to supply your invasion. And you're on your way!

# Technology Analysis

So what are the considerations that must be made when determining how to allocate scarce research points? Here are some tips to help.

## Research Difficulty

Before we get into the thick of this, let's establish one benchmark about the tech difficulty levels. Generally, without any kind of theory or practical aptitudes to improve research times, a level 1 tech that's not "ahead of time" will take about 200 days to research. Each level of difficulty beyond that adds about 20 days. So a level 5 tech would take 280 days to research if you had no knowledge "aptitude" (the knowledge levels at the bottom of the tech screen) to apply. Thankfully, many countries start with some aptitudes, and so some level 1 techs won't take that long to research for those countries.

If you continue researching a category of techs, your research time will improve, because your knowledge and familiarity with the tech category is improving.

## Research Priorities

There are a few techs which almost everyone should have on their list. There are others which should be priorities for some.

Pretty much anyone should benefit from researching Industrial Production (industry tab). This increases your IC over time without your having to build new factories. You could throw Industrial Efficiency in there too – allowing you to build things more quickly (thereby lessening the total "IC cost"), which is almost as good as increasing your IC. You could alternate between these two techs if you're really short on slots, or if you're trying to reach Advanced Construction Engineering, which requires both of these as prerequisites.

Education gives you more leadership, which can help you research more stuff – it may be slow to increase, but any increase is valuable on the long-term. If you have any reason to think you might someday run out of manpower, you should research Agriculture, because that's the only way short of building less to deal with a shortage. And who wants to build less with a hostile country bearing down on you, eh?

Even if you have only three or five tech slots, you

should consider at least one combat technology. If you're short on slots ignore the armoured techs, because those require several achievements to really make any progress, and they're more or less beyond minor powers. Choose one of the tech panels (the groupings of 4) on the infantry page – militia, cavalry or infantry – and research one or two of them at a time. Add the others into the queue so that you alternate your research between the different techs – most techs "up the tree" from you (motorised, for instance) will require not just one or two of these, but a full 4-tech panel at a certain level (usually level 3).

If you are convinced you face no land threats, but you do have a serious vulnerability by sea, you could replace (or alternate) the infantry techs with one or two naval techs. If you're short on slots, don't spread your research around – pick either submarines or destroyers, and not both. You could consider light cruiser, for instance, but only if you have the IC to realistically commit to building them. If not, stick with the cheaper subs and destroyers.

Any country which has only 5 tech slots should ignore airpower. There are too many techs (like the armoured panels) you'll need to get anywhere. Make do with what you have. But if you do have more than 5 slots, you should always consider one category of aircraft techs to research. Again, don't spread yourself thin – pick one. Small powers should choose single-engine or tactical bomber. If you've chosen single-engine, you could still branch out to multi-role or close air support later, and have a full set of close-range combat capabilities without ever adding a "second engine."

If you're at peace, have time to prepare, and you have both, more than 5 tech slots, and enough IC to build more than bare basics, you should consider Construction Engineering and Advanced Construction Engineering. These techs allow you to build factories (IC) and infrastructure – one is useful for expanding your economy, the other is useful for supplying your units and allowing them to move more quickly. If your country already has high infrastructure, there's no reason to build more, but then again if that were the case you probably already had this tech available to you.

Lastly, consider the production techs in the upper right of the industry tab. If you have a shortage, and your stockpiles are dwindling quickly, you may want to research the tech to increase production of that resource (other techs reduce consumption, of energy-to-oil, or supplies, for instance).



Sometimes it won't do any good, and it'd be a waste. Consider carefully.

## Branches of the Tech Tree

The HOI 3 technology interface does a really good job of laying out an intuitive tech tree for you, so you can tell at a glance what your prerequisites are for each tech. If this fails, you have the tooltips, which should provide everything you need to know. I'm not going to waste time mapping out a tree that's mostly obvious in the game.

But there are a few important branches that have roots that are more difficult to see. Let's explore a few of them.

The process for researching Mechanised Infantry was outlined as an example in the Manual, but let's recap. You'll need to achieve Medium Tank Brigade from the armour tab (which means getting through level 2 of all the light tank techs, then researching medium tank brigade). You'll need Motorised In-

fantry (which requires level 3 of all the Cavalry panel to be researched). And you'll need level 3 of all the Infantry panel techs. Mechanised (1941) is the only one of these techs which is "ahead of time" by 1938, which is when Motorised is supposed to be researched. If you're desperate to have Mechanised before 1938, go for it, but remember you'll face ahead of time penalties.

Heavy and Super Heavy armour are easy to understand (less easy to finish researching!) – each requires level 2 on all of the tech panel for the armoured brigade just beneath it in size. Heavy, for instance, requires you to have Medium (regular) Armoured Brigades, plus level 2 in all Medium Armour panel techs.

Researching Light Tank Brigade allows you to research and enable Armoured Cars. Researching the Light Tank panel allows you to research and enable the Self Propelled Artillery Brigade. If you have level 1 in all the Infantry panel, as well as level 2 of Artillery Carriage and Sights (armour tab), you can research and enable Rocket



Artillery Brigade. But you can't get Self Propelled Rocket Artillery Brigade until you research the Combined Arms doctrine, which is part of the Superior Firepower doctrine panel. To get there, you'll also need Mechanised Offensive doctrine, which is part of the same panel, but both this and Combined Arms are difficulty 10 techs, so each may take up to a year to research.

When you're researching armoured components, keep in mind that gun and engine techs reduce your toughness (because they're harder to maintain), armour improves your toughness and defensiveness, and reliability just improves your toughness. It's not worth ignoring the gun and engine techs just so you don't suffer in toughness – you need the whole set if you want to get anywhere with armoured research.

Similar tradeoffs exist for aircraft techs – you lose range with better engines, and you become more vulnerable with better fuel tanks. But airframe techs cut the vulnerability, etc. Everything cancels out the negatives, so

that by the time you have all the relevant techs researched you're ahead of where you were.

The "special" infantry brigades – mountain, marine & paratroop – are enabled by different levels of the infantry panel techs. Level 1 allows you Mountain Brigades. Level 2 allows Marines. Level 3 allows Paratroop. Engineers have their own tech, which requires Industrial Production level 1 before you can research it and build the brigades.

Remember that if you want paratroops, you'll also have to have Transport Planes, which requires the Basic Four Engine Airframe tech. You'll need Twin Engine Aircraft first, then Basic Aero Engine (which requires either Twin Engine or Single Engine Aircraft), then Twin Engine Airframe, which together will allow you to research its 4-engine equivalent so you can build transports and carry your paratroops. Otherwise Paratroops are just expensive infantry!

You can also extend the usefulness of some of these special units. There's a Special Forces tech under the Grand Battle Plan doctrine which improves the organisation level of all of these units. Paratroops may gain additional help through the Airborne Assault Tactics tech in the Heavy Bomber panel of the air doctrines tab.

There are a whole lot of techs which hinge upon the Electronic and Mechanical Engineering (industry tab – I'm calling this tech EE/ME from now on, for ease of use) – everything from ship, land and air radars to sonar technologies to night vision goggles. Research EE/ME first to get to Radio Technology, then move on from there to other radio-related techs like Radar. Once you've researched radar, you can build the Radar Stations. These can be used as "signals intercept" stations (i.e. they'll gain intelligence on ground units and naval units) only if you've also researched Radio Detection Equipment. Researching Radios allows you a combat advantage.

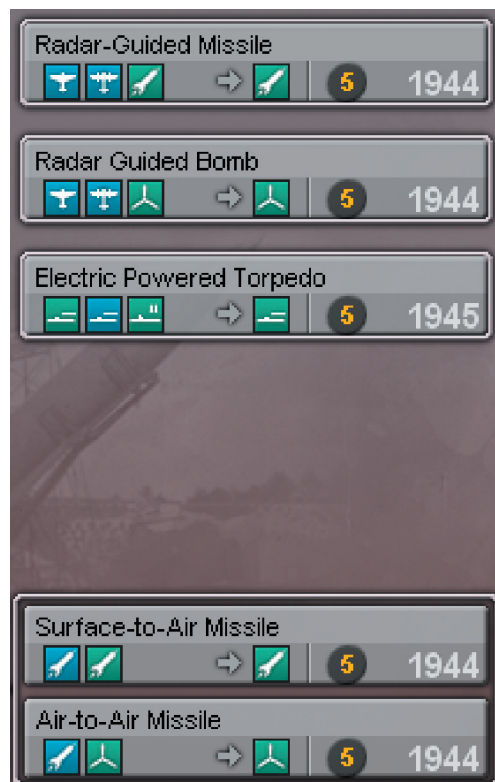
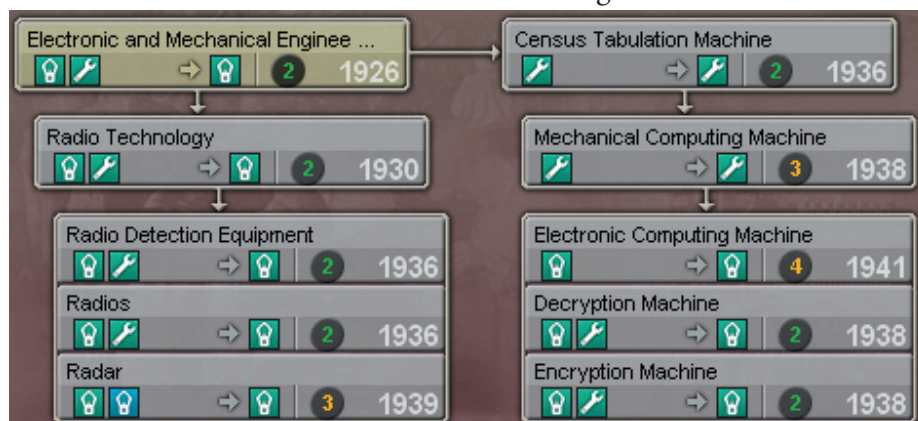
The branch of the tech tree extending to the

right of EE/ME is the computer technology panel, which mostly has application toward espionage (pro & con) and improving research in general.

Night vision technology is nice – it negates a certain percentage of the night fighting penalties on offense and defense – it helps some in attacking, but it really helps on defense. Night Vision (level 10, 1944) is in the infantry tab, and requires level 1 of Radio Technology.

Radar, as you can imagine, is the gateway tech that allows application and deployment. There are techs scattered all through the four aircraft and naval tabs which require the basic radar first, and in the secret tab, you'll find other really high-technology applications such as surface-to-air missiles and radar-guided bombs. To deploy the aircraft radars, you'll also need related aircraft techs, like Advanced Aircraft Design. Likewise, to deploy ship radars, you'll not only require the radar tech, but also must have researched the technology to build the type of ship you want to place it on (it's possible some countries have ships they cannot themselves build, and so they would need to research these technologies first – once that's done, they can both build new warships with radar, and also upgrade the ones they have).

If none of these advanced techs matter to you (i.e. you're not sure you'll survive long enough, or you aren't powerful enough to need them), forget this whole branch of the tech tree.





Researching from the aircraft and naval research tabs – four in all – depend entirely upon what your country needs. They're dictated as much by geography and your geopolitical and economic situation as they are by personal preference. If your country has battleships, research ways to improve battleships. If your country can't afford to build capital ships, concentrate on destroyer techs or cruisers. You can take on the carrier techs, if you have the IC to build them, but if you don't have the IC to also build capital ships, it might be a bit risky.

Most of the naval techs themselves are self-explanatory. As with armoured techs, these mostly involve improvements to the speed, firepower and protection of each category of ships. The "one that doesn't belong" is the carrier panel, which requires you to develop this emerging technology field before getting to build them, and then improve them like you would the other ship types. You must first have single-engine aircraft researched, then you can research Carrier Aircraft Development, which allows you to build CAGs. Once you have that, you can research Escort Carriers, and then full Aircraft Carriers.

Naval techs are supplemented by the variety of doctrine techs mentioned in the next section.

Likewise, the air tabs require a need for a certain type of aircraft. Some major countries with lots of research slots and IC to spend can "do everything" and research all major types of aircraft, keeping up with the necessary technological improvements of each. Remember, you're not limited only by what you can afford to research and build – you're also limited by how much IC you can devote to upgrading your units, or else your research does no good. Conventional aircraft are enough to keep up on, but then there are the more advanced branches...

Flying Bombs and Strategic Rockets require a long string of research. First, you'll need to research Rocket Tests – a level 4, 1936 tech in the industry tab. Then, you can build a Rocket Test Platform, which you can get at your local rocket scientist's lab for around 31 IC, delivered after 270 days of tinkering. From there, you research Rocket Engine (level 4 1939 – also in the industry tab), and can then research Strategic Rocket De-



### Capital Ship Main Armament: 1

#### Capital Ship Main Armament (1)

Battleships and battlecruisers carry similar designs of heavy guns. Better guns, firing heavier shells at a higher speed, will mean we can build capital ships which are even more powerful against surface targets.

velopment (level 4, 1940) and then Flying Bomb (level 4 1942), which are both under the secret tab. That gives you the V-1, which is actually a pretty versatile strategic bombing instrument (they're used like airwings, so you can re-use them and build more). The V-2 rocket requires further investment of research time – Strategic Rocket is a level 5, 1943 tech. From there, the V-2 can be improved with some additional techs.

Rocket Interceptors and Jet Interceptors lay along this path too. You'll need Rocket Engine to level 1 (that was level 4, 1939), and also three of the four basic single engine panel, which allows you to research three of the four advanced single engine panels (it doesn't say "advanced" – they're the ones next to the basic). Once you've researched the final, Rocket Interceptor tech (level 4, 1941), you'll be able to build something like the German Me-163 Komet. If you want the Jet Interceptors, like the Me-262, you need to research a slightly different part of the tree, because jets are more complicated than rockets.

This will take some time, of course. Without ahead-of-time research, Theoretical Jet Engines (1940) is the first tech to contribute to Jet Engine Theoretical, and so you won't have much theoretical help with the level 14, 1943 dated, tech Jet Engine. If you want jet engines before 1944, you'll face an astounding ahead-of-time penalty. Fortunately, there's a Jet Engine Research tech in the Theory tab, so you can increase your research speed some by researching that theory tech.

There is no model for jet interceptors – it's assumed you have jet interceptors when you have upgraded your interceptors to use jet engines (they'll see an impressive increase in speed, but lose some of their range).



### Jet Engine: 1

#### Jet Engine (1)

The jet engine is a high-powered engine that allows our aircraft speeds not before considered possible. However these engines are thirsty for fuel and consequently their operating range will suffer.

Int F: Max Speed +100.00 KPH, Range -50 KM  
Ftr: Max Speed +100.00 KPH, Range -50 KM  
Tac: Max Speed +75.00 KPH, Range -50 KM  
StG: Max Speed +75.00 KPH, Range -50 KM  
Nav: Max Speed +75.00 KPH, Range -50 KM



14 1943

Start Research



## Nukes!

The pinnacle of the research tree, of course, is the A-Bomb (called a nuclear bomb in the tech tree – it was an atomic bomb back then). The good news is any country can research the atomic bomb! The bad news is it will take a minimum of about 2000 days of research (that's almost 6 years!), and that's assuming it's not ahead of time research. Plus, you also need a nuclear reactor built somewhere (and undamaged!), which requires 75 IC and a lot of time. Since some of the required techs are 1940, 1943, etc., you can assume that even starting research in 1936, and even considering concentrated research will increase your knowledge, which will reduce your research time gradually, it may still take 7 years or more for a country to research the whole branch, unless they're fortunate enough to have researched part of that tree prior to game start. Good luck with that – just don't use it on *me!*

## Doctrines

It's easiest to deal with land doctrines first, because those are the most complicated to understand. Air and naval doctrines are more straightforward – you pick what types of units you most need, and concentrate on those doctrines.

For land, there are four major doctrine categories. Fortunately, you are not limited to researching from only one doctrine panel, because there are some doctrines which have “crossover appeal.”

Technically, Spearhead Doctrine is meant to reflect German tactics, Superior Firepower is meant to reflect American, Grand Battle Plan is meant to represent Montgomery-style complicated British operations, and the Human Wave Doctrine is meant to represent Soviet-style tactics. However, these don't translate completely. Theoretically, if the USSR were reduced to using lots of militia and garrison units, they could benefit from Human Wave doctrine, and the partisans they do have popping up all over the place will benefit also (albeit not under the player's control). But the Soviets used lots of armour and infantry units in general, so the USSR player may well prefer one of the other three doctrine panels instead.

Spearhead Doctrine is great for anybody who relies heavily on mobile, largely armoured offensive (or counter-offensive) thrusts. It makes the Breakthrough combat event more likely, improves attack movement speed, reduces armoured division combat width (meaning you can



fit more tanks onto the battlefield). It also improves armoured unit organisation (durability on a breakthrough attempt), and morale (ability to recover damage and keep going in a long campaign).

Superior Firepower Doctrine helps out with motorised and mechanised brigades, improving their morale and organisation (again, recovery and durability – long and short term survivability). This doctrine allows the fifth brigade which may come in useful. It also puts a heavy emphasis on combined arms, extending that bonus.

The Grand Battle Plan favors players who use a lot of specialized units – artillery, special forces, anti-tank units, etc. But it also benefits countries which use a lot of infantry brigades, improving their morale and organisation. One key element of this doctrine is the benefit to reinforcement chance offered by the Grand Battle Plan tech.

Human Wave doctrine is almost better suited to China than it is for the Soviet Union. If you do employ a lot of garrisons or militia, this will help you out. It also helps countries which often have too many divisions in battle to fit on the combat front – the Human Wave tech allows reduced stacking penalties, and the Large Formations tech lessens the width of militia and garrisons on the battlefield. The reduction of attack delay is helpful for counterattacks, which may be just what an infantry-heavy country needs. Naturally, armour-heavy countries like it too.



The “crossover” doctrine techs that anybody might enjoy researching include the Superior Firepower tech (the tech, not the whole doctrine – allows an extra brigade per division, though this requires Tactical Command Structure as a prereq), Combined Arms Warfare (again, requires Mechanised Offensive as a prereq, so might be expensive, but it adds to your combined arms bonus), Infantry Warfare (improves infantry organisation – who doesn’t have infantry?), Special Forces (increases organisation for special units like Mountain or Marine brigades), and Operational Level Organisation (reduces your attack delay – good for countries on the offensive a lot). The Superior Firepower doctrine techs which improve morale and organisation for motorised or mechanised units (and cavalry, if you’re a small country with limited resources) may be valuable to countries which use those units.

Air doctrines generally match with the type of aircraft you’re trying to develop. Each panel has a set of doctrine techs which improves some aspect of the aircraft type’s utility. However, watch for crossover appeal here too. The ground attack and interdiction efficiency improvements listed under the Close Air Support panel may be helpful for tactical bombers too, and the added

efficiency for airbase strike mission (among others) in the tactical bomber panel may aid CAS units. The only obstacle here is that you must first research the prerequisites, which happen to be close air support and twin-engine techs.

Naval doctrines are designed to match your style of fighting, much like the concept for land doctrines. If you’re raiding the enemy’s commerce, pick the Fleet Auxiliary Submarine Doctrine, which helps not just submarines but also raiding cruisers, etc. If you’re using aircraft carriers a lot, or if cruisers form a large part of your naval combat strategy, you may find elements from the Fleet Auxiliary Carrier Doctrine that would help you. Sea Lane Defense is concentrated around battle fleets and battle-ships. Best advice here is to read the tooltips and find what’s best for you.



## Theory Techs

There's been a lot of questioning and debate over the issue of whether it's worth it to research "theory techs" (the techs under the theory tab).

As has already been noted, there are specific cases (jet engines, for instance) where theory techs can be very important (nuclear physics and rocket theory work the same way). In general, they are not. The same improvements in knowledge aptitudes can be achieved through the normal research tree. But there are times when you may benefit from researching theories anyway.

Researching a theory always benefits you if you're either building or researching that type of unit. The question is whether it helps you as much or more than researching a relevant tech from the regular tree, and the

answer there is often "no."

However, some players will use the theory techs to "warm up" a research line gone cold. Say you had built some armoured units early on, but have been busy building your fleet. You can research the automotive, or some other relevant theory tech, to re-build your knowledge base and make research and construction in that area easier and faster – just think a little ahead of time, and throw it into the queue when you're a few months from going into that shift in research priorities.

Also, if you're really relying heavily on one category of research and production – building a whole army of tanks, for instance – then you get to almost double the speed of your improvement in knowledge by researching theory techs in addition to your regular tech panels.



The *USS Wasp* (CV-7), burning and slowly sinking after being torpedoed by a Japanese submarine in September 1942.



# Unit Analysis

## RESULTS FROM “THE SANDBOX”

### Uniformity

There's no way to predict “individual rolls of the dice,” but on the whole you can expect battles with similar odds to have results similar to each other. One 3:1 battle is likely to mirror the results of another 3:1 battle with the same composition. Combat events and other factors may influence one battle differently from another, but over the time period most HOI 3 battles take to conclude, these usually average out so that they do not make a serious difference. The exceptions may be combined arms bonuses and leader bonuses – each of which may carry a unit through where another failed, etc.

### Resilience

Reliably, units will be forced to retreat at around 1 organisation, and they will have suffered between 8% to 12% strength casualties by that time. No unit is ever destroyed by strength loss unless it's surrounded, but because it takes time to recover organisation loss, a division which begins retreating and is kept under constant pressure does not have much hope of halting its retreat.

### Terrain

The effects of terrain modifiers don't seem to have a huge impact on combat efficiency. Yes, forests can impose some significant penalties against armoured units, but these modifiers are usually counteracted by leader and experience bonuses, so that the overall efficiency remains in the region of 100% (whereas units with less terrain penalty might have efficiencies of 130% or more).

Attacking single cavalry brigades in forest with an infantry division resulted in eventual victory for the infantry. These battles took about 120 hours (5 days). Basically the same result could be seen with three infantry brigades (in a division) versus a single infantry brigade in forest – attacker's victory in about 120 hours. However it cannot be argued that the terrain really made a serious difference – this doesn't look much different from the results of the same setup on plains.

Where terrain does definitely make a difference is with armour, where the “German Mixed Panzer Divisions” (see combined arms, below) have their casualty infliction rates cut in half while operating against defenders in forests.

### Even Odds Battles

As we hoped we'd find, battles between opponents of equal strength tend to favor the defender. For gameplay purposes, winning battles is not meant to require 3:1 odds or better – especially not on the long term – even though that might have been required historically. But you must always consider it necessary to have either superior force when attacking a defended position, or else have good air support.

I played four separate tests of relatively equal units – three-brigade divisions of Infantry III against a like-sized but slightly technologically inferior Infantry II division (the balance on some fronts in the German-Poland 1939 scenario), and these tests reliably showed 25% to 50% higher casualties against the attacker's organisation and strength.

Testing two infantry divisions versus two infantry divisions, and then later two divisions of five infantry brigades and an armoured car brigade versus six infantry brigades in two divisions – both of these scenarios resulted in a static battle of attrition, with no real advantage to either side. In the end, it's likely the defenders would have won both battles.

### Infantry vs. Infantry, Mountain vs. Mountain

Mountain divisions may have a significant advantage in their “home territory” – the mountains – but in any other terrain they are approximately equivalent to regular infantry. Therefore, you would be best advised to use them where they have the advantage.

Infantry fighting each other – two divisions vs. one division – will eventually result in victory for the attacker, but it could take a while – tests showed anywhere from 5 to 8 days (120 hours to 180), with terrain contributing to longer battles.

Interestingly, six divisions versus three divisions (multi-front battle, so that everyone could fight along the front) resulted in victory after 125 hours, with one defending division retreating first, shifting the battlefield

odds and inviting a collapse.

Three divisions versus just one division demonstrated the resiliency of not having to rely upon your neighbor, as these defenders lasted through about 130 hours before retreating.

Increasing the odds to 9:1 (three divisions versus a brigade) resulted in a 52-hour battle, which for HOI 3 is pretty darned quick.

These divisions often fought at 137% efficiency on attack versus 114-124% efficiency on defense, which at 9.6 soft attack results in 13 shots for the attacker and 11 for the defender, while the attackers had 22 effective toughness versus 25 defensiveness. With defensiveness and toughness values that much higher than the soft attack, it's no surprise why these battles take so long to rack up decisive damage.

## Combined Arms & Armour Bonuses

Reliably, armoured divisions tear up softer units quickly. There is a hard-coded preference in the combat system which causes this, and it has a significant impact on combats involving heavier units.

I ran several tests with the German "model 1939" panzer divisions they use in the invasion of Poland. I'll call them "mixed panzer divisions" – they have one motorised brigade, one light armour and one regular (medium) armour brigade. This unit always has a combined arms bonus. In one test, attacking a mountain division in plains (the Poles have several deployed in the plains at game start), the Polish mountain division suffered 4 times the casualties of the German panzer division, and lost an average of 1 point of organisation every hour. One test

produced 5:1 casualties. It would have taken probably 150 hours to defeat them, at that rate, but remember this is just one division attacking! The combined arms bonus added to the (invisible, hard-coded) armoured bonus made this result inevitable.

In another similar test against infantry, the mixed panzer division took 147 hours to win (in plains), but only caused a 2:1 casualty ratio – sure victory, in time, but less decisive. However, that same battle using infantry vs. infantry would clearly have been a loss for the attacker.

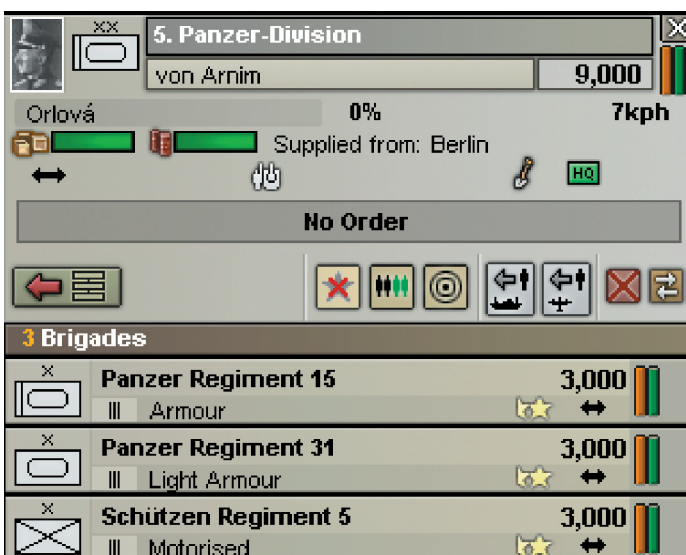
Doubling the odds, with two mixed panzer divisions against one infantry, brought victory in 62 hours, with 6:1 casualty figures.

To illustrate how these battles turn out so lopsided, let's look at the combat figures and efficiencies involved. Adding leader bonuses, experience and combined arms bonuses together, these mixed panzer divisions often had an attack efficiency of 167% in daylight on plains terrain. At 11 soft attack, these divisions could get 18 shots against the infantry's 18 defensiveness at 119% efficiency, which results in about 21 chances to defend. I'm not sure of all the math going on behind the scenes, but it's obvious from combat results that odds like this are still going to cause significant damage. With only 3 shots (hard attack) against the 19 toughness of the mixed panzers, you can see how quickly the battle gets lopsided. In v1.1c, any terrain is only going to mitigate the huge efficiency advantage of combined arms on the attack.

Mixed panzer divisions fared less well attacking against straight armour – one mixed division versus one mythical Polish armour II division resulted in defeat of the mixed division despite the combined arms bonus. Obviously, the full armour bonus of the Poles worked against the motorised elements of the mixed division. The same setup with two mixed divisions against one Polish armour II division resulted in a German victory after 180 hours, with 2:1 casualties taken by the Poles, and the mixed divisions even had enough combat strength and organisation to go into battle again.

Further tests...

Using a team of one mixed panzer division and one infantry III division versus one infantry II division produced a German victory in 130 hours with 3:1 casualties against the Poles. A mixed panzer division with two motorized I divisions versus the same infantry division resulted in victory in 87 hours, with 4:1 casualties. Two divisions of mixed panzers and one infantry III division against a Polish Infantry III division (beefing them up





slightly) delivered victory in 60 hours with 6:1 casualties.

Lastly, moving the setting to forest (reducing the mixed panzer combined arms advantage), three divisions of mixed panzers and two divisions of infantry III versus three divisions of infantry III resulted in a 57-hour German victory with 6:1 casualties against the Poles. An earlier test of one mixed panzer versus one Polish infantry II division had taken 220 hours to complete, and Polish casualties were barely more casualties on the Polish side than the German side.

The lessons from these last set of sandbox tests seem to be that forests matter more with fewer divisions engaged (perhaps going back to our earlier discovery that more divisions means whoever loses a division from the field of battle first will likely collapse quickly after), and that the combination of combined arms bonuses and armour bonuses are each very decisive in battle.

## Anti-Tank Brigades

I tried to see if mixed panzers would fail if faced by anti-tank brigades. I replaced one brigade of the defending infantry division with an anti-tank brigade. Two mixed panzer divisions still crushed the defenders. In fact, they collapsed more quickly – 57 hours. I believe taking 2,000 combat soldiers out of the front lines handicapped the infantry more than the anti-tank guns provided advantage. The mixed panzer divisions were still hardly damaged, while the infantry took 5 times as many casualties.

On a similar thread of thinking, I tried replacing the motorised brigades in the mixed panzer divisions with anti-tank brigades (softness 100%, which preserves the combined arms bonus), and sending them against straight armour. Remember our earlier test with two mixed panzer divisions against one full armour division (victory in 180 hours)? The addition of anti-tank brigades, despite the loss of 4,000 infantry troops, produced victory in 157 hours with 2:1 casualties – a better result than with the motorised infantry.

Clearly (or not so clearly), the utility of anti-tank brigades depends on circumstance. Despite not seeming to have a huge impact on some battles (yet more in others), they may still have good utility because of their cost benefit ratio (CBR) – shown in the chart later in this section as a very high rating of 50.



An M3 Stuart light tank, used by the Americans in North Africa, Guadalcanal, and elsewhere.

## Tank Battles

Many players may presume that armoured divisions equal victory, but this is not always the case.

Two armoured divisions versus three infantry divisions in woods (efficiency modifiers approximately equal) produced only a gradual armoured victory, taking 360 hours (2 weeks!). Casualties between the units were almost equal. The armoured divisions had 13 organisation left over after their victory, but after two weeks what targets would they possibly have to exploit? A breakthrough attempt would long ago have either succeeded or been thrown back.

The same scenario – same unit setup – in plains resulted in a 230-hour armoured victory, with 2:1 casualties, and with 27 organisation remaining with the armoured divisions. Obviously, more armour, or better combined arms bonuses, are required to overwhelm three infantry divisions in a timely manner.

Testing three armoured divisions and one infantry division versus two infantry divisions defending in a forest resulted in an armoured victory in 168 hours. The armour was virtually undamaged after all that, but the attacking infantry had suffered casualties. The same setup in plains took only 96 hours (4 days), and casualties were 4:1 against the infantry defenders (again, the armour took little damage).

In straight medium armour versus medium armour battles, the “armour bonus” does not apply – the softness threshold is not met. Testing a battle of like-technology armour divisions at 2:1 odds, the defender lost after 113 hours with 3 times the casualties of the attacker.

In a final couple of tests, I attempted a variation on the mixed panzer division. I combined two medium (regular) armour brigades with one infantry brigade (basically, upgrading the light armour to medium – the infantry could easily have been motorised, the stats are virtually the same, so it doesn't matter in combat). Three of these upgraded mixed panzer divisions against two infantry divisions did get the combined arms bonus, and successfully defeated the infantry in only 96 hours with 3:1 casualties. Almost all the casualties to the attacker were to the infantry, probably because the enemy's soft attack had many more opportunities to fire on the soft element of the attackers.

Then I ran a "control" test – three full medium armour divisions versus two infantry divisions (simply replacing the mixed infantry in the attacker's force with an extra armour brigade, adding combat power but losing the combined arms bonus). Despite the extra armour bonus they got, this battle took a full 16 hours longer – 112 hours total – to achieve the same result that the combined arms divisions had achieved in 96 hours. Obviously, combined arms is worthwhile when constructing divisions!

## Japanese Independent Mixed Brigades

3 Brigades			
	Infanterie Regiment 30	2,573	
III	Infantry		
	Infanterie Regiment 51	862	
III	Artillery		
	Infanterie Regiment 54	862	
III	Engineer		

These divisions are deployed in China in v1.1c. There are rumors that they may be replaced by a different composition in v1.2, but the current patch has one infantry division paired with two support brigades – artillery and engineers – for a one-width combat front with significantly back-loaded punch (i.e. much of the power isn't on the front lines). Testing confirmed my hypothesis that they were useful in numbers, but fragile by themselves. More of these divisions would need to be brought in to constitute a serious and continuing military presence. Whether they exist in later patches or not, this could be a lesson to those who like the idea of small frontage units with many support brigades behind.

Three "independent mixed brigade" divisions were pitted against two divisions of infantry III. That's a combat front of 3 for the IMBs, who have 15,000 troops total, versus the six-width infantry which equals

18,000 troops. The IMBs won, after a tortuous 265-hour battle (11 days!), but casualties were approximately even between the two sides, and the three front-line infantry brigades were completely gutted, down to less than 10% strength and a remaining organisation of 3. Any tougher opponents than this would have beaten the IMBs.

The IMB concept might work if you could combine five divisions or more into one combat, but you should probably have extra infantry brigades handy, to change them out like worn tires while the spent infantry brigades recover. Ultimately, the question comes down to whether the expense of producing these gawky, unwieldy, modular units is worth their questionable benefit.

## Mechanised on Defense

Mechanised divisions have the highest soft attack and defensiveness values of any brigade in the game. They're clearly designed to excel at defense, even while packing a serious punch on offense. At 70% softness, only minor modifications (a little armour support – a light armour brigade?) can place mechanised divisions into the realm of the combined arms bonus.

Testing two armoured divisions (Armour III – medium armour) against three mechanised divisions. After an incredibly long battle of attrition (I lost count – 300 hours, 400?), the two sides totally exhausted each other, with nearly 100% organisation loss on either side. But, just as remarkable, with virtually no strength damage on either side!

Grässner		Rola-Zymierski	
2 units, 6 width.		3 units, 9 width.	
	27. Infanterie-Division		Obóz Warowny M ...
Landsberg		Koscian	
	68. Infanterie-Division		27 Dywizja Piechoty
Landsberg		Koscian	
			25 Dywizja Piechoty
		Koscian	

These mechanised divisions did their job – they stopped the armoured assault cold. Both sides could back off, recover their losses, and theoretically be back at it again with a couple of weeks, preferably with some decisive reinforcements on one side or the other.



The question here becomes whether their expense – a cost of 25, compared to a light armour cost of 13, a motorised brigade's cost of 10, and a regular infantry cost of 3 – is worth their benefit. This depends on a lot of abstract, and even personal factors, and likely will only become clear in time. You may find it helpful to examine the Cost Benefit Ratio (CBR) discussion later in this discussion.

Worth considering in that calculation: the test case pitted two medium armoured divisions against three mechanised, but the armour owner only spent a relative cost of 40 on his, while the defender spent nearly 70 on his 3 mechanised divisions.

## Garrisons Hold Steadfast

Garrison units have virtually no ability to move (they move at only  $\frac{1}{4}$  the speed of regular infantry, which is “slow” by World War II standards), they are very good at the job they're meant for – holding territory. For such cheap units (rated at 1 in our cost chart), they have remarkably high defensiveness. They may not have the soft (or hard) attack ratings to do damage to an enemy, but they are able to hold the ground they're assigned to.

Testing two divisions of infantry III against two divisions of garrison, the garrison divisions were actually able to hold on for 300 hours! Value for value, the infantry holds a combat value about twice what the garrison unit does, but the garrison's high defensiveness makes it less vulnerable to damage, which prolongs its ability to withstand attack until reinforcements can arrive.

## Headquarters in Combat

In the Strategy Guide, I warned against using HQ brigades in combat, for fear they would shatter quickly. Combat testing has shown this is not such a concern. The HQ brigades actually fend for themselves quite well when attacked by less-than-overwhelming force. On the other hand, they are virtually toothless, and they're still relatively fragile compared to combat brigades. Since they can't hope to do any damage (with .4 soft attack and .1 hard attack, they're lucky to ever qualify for even one valid “shot” against the enemy, using the HOI 3 combat system), they're guaranteed to lose in one-on-one combat eventually. Because of the talents of generals who often populate HQs, you may even find some decent leader bo-

nuses in combat!

The only reason why you'd really want to bring an HQ unit into combat, as noted in the Strategy Guide, is to add another front, increasing the combat frontage and perhaps adding an envelopment penalty to a battle launched from elsewhere. HQs add virtually nothing in combat statistics on offense. I tested an HQ one-on-one against a 25% strength Polish reserve division which took almost no damage but made serious inroads against the HQ's strength and organisation.

## Detached Brigades in Combat

I had similarly warned against allowing non-combat brigades to encounter the enemy. This has been shown not as valid a concern either. Like HQs, these support brigades are fragile, and their combat ability is less than one might expect from a front-line combat brigade. But they seem relatively resilient, and are likely to be able to withstand a day or two of combat with serious losses, but without being shattered.

I also tested detached brigades against a “control” experiment. The control test was one division of infantry versus two divisions of infantry defending in forest – this resulted in the defeat of the attackers after 175 hours (not bad, considering). Casualties were weighted 2.5:1 against the attackers.

My hypothesis was that those six defending brigades, taken out of their support structure of the division would have a much harder time of it, perhaps even resulting in defeat. My experiment proved otherwise. It took longer – 216 hours – for the attackers to be defeated, but the three-brigade division of attackers still lost. Casualties were less than 2:1 though, so it's clear the divisional structure does provide cohesion and durability that is lacked by detached brigades operating independently within the same battle.

## Envelopment & Surrounding

Testing showed that envelopment is not very effective unless it involves attacks from several directions at once. There's no penalty for a second front unless it's a multiple combat (a direct flanking attack against an existing engagement), and additional fronts only change this by -10 per, which is less than many terrain penalties. If you're attacking from four directions or more – real “envelop

ment” situations – this could start to become decisive. Plus, being out of supply becomes more likely in those cases, and out of supply penalties have a clear, decisive impact upon combat results.

## Airpower Impact

Remember, all of these tests were conducted without air cover or air support on either side. Adding combat air support for ground attack or interdiction missions would change the character of combat entirely, causing even-odds battles to favor the side with air cover, and either speeding victory or stalling it, depending which side of a higher-odds battle had the air support. I didn't test it in the sandbox, but in v1.1c interdiction and ground attack missions are pretty strong, and would definitely tip the balance. Air cover, of course (air superiority or air intercept) prevents the impact of airpower support being so great, though in v1.1c air combat is not very effective at halting attacks (that's likely to change somewhat in v1.2).

## Cost To Benefit Analysis

There are sure some fine combat brigades out there – bright, shiny, and with combat values that would make the most hardened enemy sergeant blanch! But how much are you going to spend to get them, and would that IC or production time (or manpower, even) have been better utilized on a different unit, or two, or three?

I've developed some abstract numbers, shown in the chart on the next page, to 1) approximate combat utility, 2) the total cost of building a particular type of brigade, and 3) the approximate cost-to-benefit ratio of each type of brigade.

The “combat utility” rating (CU) is a very abstracted number, but still hopefully useful. Different units have different purposes. Downgrading garrisons, for instance, for their lack of hard attack value wouldn't be fair. Nor would it be fair to the abilities of anti-tank brigades to downgrade them because they have poor soft attack – that's not their purpose. I judged that a reasonable measure of a brigade's overall combat utility toward its designed purpose could be achieved if we added their three highest “combat values” – the best three out of four of soft attack, hard attack, defensiveness and toughness. This number is listed as “CU” in the chart – Combat Utility.

The cost of a brigade to produce is easily quantifiable: multiply the IC investment by the number of days to produce, which produces an “IC day” figure. Rounded down to a manageable number, this produces the cost as shown in the chart. IC investment changes, over time, according to Industrial Efficiency, but the change is relative, so it won't change the chart values. The only thing that will shift these cost values are production benefits from practical knowledge – you'll improve your ability to produce what you're already producing.

The “Cost-to-Benefit Ratio” (CBR) is a very abstract figure achieved by dividing the combat utility by the cost and multiplying by ten. The asterisks in the chart indicate when this number is so abstract that it ignores other important things you should still consider.

There's more than the hard figures you must always take into account. The chart shows each brigade's speed, their manpower cost, etc.

Some units still cannot be fairly “graded” according to these abstract measures, and those units have an asterisk “\*” next to their CBR rating. For instance, self propelled artillery has a CBR of only 18. But when you consider its value exists partly in its speed and ability to provide artillery support “on the run,” its real value exceeds the 18 value in ways that are abstract and not very measurable. You should take this into account. Likewise, you can't hold a low grade of 32 against paratroopers. Its CBR may be way lower than regular infantry, but paratroops have an ability (airdrop) that makes it far more valuable than regular infantry in specific circumstances. Many units have asterisks either because of their speed or a special ability (engineers are not shown on the chart, but obviously they have special abilities too).

Lastly, for some countries, at some points during the war, there may be an additional consideration that must be made. You may consider it wasteful to build mechanised brigades, because their CBR makes them 10 times more expensive (per combat utility rating) than garrisons. But that's not a good measure in some circumstances. What if your manpower shortage is far worse than your IC shortage? The same manpower can staff 10 garrison brigades or 9 mechanised brigades. If you're short on manpower and rich in IC, you'd be much better off building mechanised brigades, because you'd get a combined combat utility of 297 from 9 mechanised brigades for the same manpower you'd use for a combat utility of just 140 from 10 garrisons.



# Unit Cost Benefit Comparison

## Analysis of Combat Utility (CU), Cost (\$\$) and Cost Benefit Ratio (CBR)

									CU	\$\$	CBR
 <b>Armour</b>	<b>7</b>	<b>7</b>	<b>10</b>	<b>14</b>	9	9.65	2.33	222	<b>31</b>	<b>21</b>	<b>15</b>
 <b>Heavy Armour</b>	<b>6</b>	<b>7</b>	<b>13</b>	<b>6</b>	7	12.38	2.33	237	<b>26</b>	<b>29</b>	<b>9</b>
 <b>Light Armour</b>	<b>5</b>	<b>4</b>	<b>7</b>	<b>11</b>	11	7.04	2.33	193	<b>23</b>	<b>13</b>	<b>18</b>
 <b>SH Armoured</b>	<b>4</b>	<b>7</b>	<b>11</b>	<b>5</b>	3	11.21	0.67	202	<b>23</b>	<b>23</b>	<b>10</b>
 <b>Mechanised</b>	<b>8</b>	<b>4</b>	<b>11</b>	<b>14</b>	10	10.56	3.00	241	<b>33</b>	<b>25</b>	<b>13*</b>
 <b>Motorised</b>	<b>6</b>	<b>2</b>	<b>10</b>	<b>10</b>	9	6.01	3.33	166	<b>26</b>	<b>10</b>	<b>26*</b>
 <b>Mountain</b>	<b>5</b>	<b>2</b>	<b>10</b>	<b>11</b>	4	2.89	5.00	177	<b>26</b>	<b>5</b>	<b>52*</b>
 <b>Marine</b>	<b>5</b>	<b>2</b>	<b>10</b>	<b>11</b>	4	3.25	5.00	189	<b>26</b>	<b>6</b>	<b>43*</b>
 <b>Paratroopers</b>	<b>5</b>	<b>2</b>	<b>10</b>	<b>11</b>	4	4.33	5.00	177	<b>26</b>	<b>8</b>	<b>32*</b>
 <b>Infantry</b>	<b>6</b>	<b>2</b>	<b>10</b>	<b>10</b>	4	2.59	3.33	115	<b>26</b>	<b>3</b>	<b>86</b>
 <b>Cavalry</b>	<b>5</b>	<b>1</b>	<b>7</b>	<b>8</b>	5	2.42	3.00	143	<b>20</b>	<b>3</b>	<b>67*</b>
 <b>Militia</b>	<b>2</b>	<b>1</b>	<b>8</b>	<b>2</b>	3	1.51	2.00	61	<b>12</b>	<b>1</b>	<b>120</b>
 <b>Garrison</b>	<b>3</b>	<b>1</b>	<b>9</b>	<b>2</b>	1	1.90	2.67	74	<b>14</b>	<b>1</b>	<b>140</b>
 <b>Armoured Car</b>	<b>5</b>	<b>0</b>	<b>7</b>	<b>11</b>	10	3.69	1.67	132	<b>23</b>	<b>5</b>	<b>46*</b>
 <b>S-P Artillery</b>	<b>7</b>	<b>2</b>	<b>9</b>	<b>7</b>	10	5.68	1.33	210	<b>22</b>	<b>12</b>	<b>18*</b>
 <b>S-P Rocket Artillery</b>	<b>7</b>	<b>1</b>	<b>7</b>	<b>8</b>	11	4.27	1.33	198	<b>22</b>	<b>8</b>	<b>27*</b>
 <b>Tank Destroyer</b>	<b>2</b>	<b>9</b>	<b>9</b>	<b>5</b>	8	5.21	1.67	226	<b>23</b>	<b>12</b>	<b>19*</b>
 <b>Anti-aircraft</b>	<b>1</b>	<b>2</b>	<b>5</b>	<b>1</b>	4	2.35	1.67	105	<b>8</b>	<b>2</b>	<b>40*</b>
 <b>Anti-tank</b>	<b>1</b>	<b>8</b>	<b>5</b>	<b>2</b>	4	2.69	1.33	110	<b>15</b>	<b>3</b>	<b>50</b>
 <b>Artillery</b>	<b>7</b>	<b>2</b>	<b>5</b>	<b>3</b>	4	2.80	1.33	114	<b>15</b>	<b>3</b>	<b>50</b>
 <b>Rocket Artillery</b>	<b>7</b>	<b>1</b>	<b>4</b>	<b>4</b>	5	2.58	1.33	101	<b>15</b>	<b>3</b>	<b>50</b>
 <b>Military Police</b>	<b>1</b>	<b>0</b>	<b>4</b>	<b>1</b>	4	2.72	1.00	60	<b>6</b>	<b>2</b>	<b>30*</b>

# Comparison of Unit Type Combat Stats Over Time

(Assuming On-Schedule Tech Advancements & Timely Upgrades)

BRIGADE TYPE		BASE (Game Start)				1936				1939				1941				1944				
		SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH	
COMBAT BRIGADES																						
	Heavy Armour	3.33	3.5	7	4	n/a	n/a	n/a	n/a	5.33	6	10	5.2	6.33	7.25	11.5	5.8	7.33	8.5	13	6.4	
	Armour	2.33	2.33	4.67	4	3.33	3.33	5.67	5	4.33	4.33	6.67	6	5.33	5.33	7.67	7	7.33	7.33	9.67	9	
	Light Armour	1.67	0.67	3.67	3.33	2.67	1.67	4.87	4.53	3.17	2.17	5.47	5.13	3.67	2.67	6.07	5.73	4.67	3.67	7.27	6.93	
	Mechanised	3	1	5.67	4	4.8	1.9	7.47	5.4	5.7	2.35	8.37	6.1	6.6	2.8	9.27	6.8	8.4	3.7	11.07	8.2	
	Motorised	2	0.67	5.33	3	3.2	1.17	6.93	4.2	3.8	1.42	7.73	4.8	4.4	1.67	8.53	5.4	5.6	2.17	10.13	6.6	
	Cavalry	1.67	0	3.33	2.67	3.17	0.3	4.83	3.47	3.67	0.4	5.33	3.87	4.17	0.5	5.83	4.27	5.17	0.7	6.83	5.07	
	Infantry	2	0.67	5.33	3	3.2	1.17	6.93	4.2	3.8	1.42	7.73	4.8	4.4	1.67	8.53	5.4	5.6	2.17	10.13	6.6	
	Paratroopers	1.67	0.33	5	4	2.87	0.73	6.6	5.2	3.47	0.93	7.4	5.8	4.07	1.13	8.2	6.4	5.27	1.53	9.8	7.6	
	Marine	1.67	0.33	5.33	3.67	2.87	0.73	6.93	4.87	3.47	0.93	7.73	5.47	4.07	1.13	8.53	6.07	5.27	1.53	10.13	7.27	
	Mountain	1.67	0.33	5.33	3.33	2.87	0.73	6.93	4.53	3.47	0.93	7.73	5.13	4.07	1.13	8.53	5.73	5.27	1.53	10.13	6.93	
	Militia	0.67	0	4.33	0.67	1.57	0.3	5.83	0.97	1.87	0.4	6.33	1.07	2.17	0.5	6.83	1.17	2.47	0.7	7.83	1.37	
	Garrison	1.67	0.33	5	0.67	2.57	0.63	6.5	0.97	2.87	0.73	7	1.07	3.17	0.83	7.5	1.17	3.47	1.03	8.5	1.37	
SUPPORT BRIGADES																						
	SH Armoured	4	7	11	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	6	9.5	14	6	
	Armoured Car	2	0.33	3.67	3	2.8	0.33	4.47	4.2	3.6	0.33	5.27	5	4.4	0.33	6.07	5.8	5.2	0.33	6.87	6.6	
	Artillery	2.33	1.33	3.33	1.67	4.73	1.73	3.73	2.07	5.33	1.83	3.83	2.17	5.93	1.93	3.93	2.27	7.13	2.13	4.13	2.47	
	S-P Artillery	2.67	1.33	5.33	2.33	3.87	1.33	5.93	2.43	4.47	1.33	6.53	2.53	5.07	1.33	7.13	2.63	6.27	1.33	8.33	2.83	
	Rocket Artillery	2.67	1	3.33	2.33	n/a	n/a	n/a	n/a	3.67	1	3.53	2.53	4.67	1	3.73	2.73	6.67	1	4.13	3.13	
	S-P Rocket Artillery	3	1	4	3.33	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5	1	5.8	4.03	7	1	7	4.63	
	Tank Destroyer	2	3	4.67	2	2	5	5.27	2.1	2	6	6.17	2.2	2	7	7.07	2.3	2	9	8.57	2.4	
	Anti-tank	0.67	2.33	4	1.67	0.67	4.33	4.4	1.67	0.67	5.33	4.6	1.67	0.67	6.33	4.8	1.67	0.67	8.33	5.2	1.67	
	Anti-aircraft	0.67	1	3.67	1.33	0.67	1.4	4.07	1.33	0.67	1.6	4.27	1.33	0.67	1.8	4.47	1.33	0.67	2.2	4.87	1.33	
	Military Police	0.67	0	4.33	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
	Engineer	0.33	0.67	4.33	1.67	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	

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## Comparison of Unit Type Combat Stats Over Time 1936 - 1939
























(Assuming On-Schedule Tech Advancements & Timely Upgrades)

BRIGADE TYPE	BASE (Game Start)				1936				1939			
COMBAT BRIGADES	SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH
Heavy Armour	3.33	3.5	7	4	n/a	n/a	n/a	n/a	5.33	6	10	5.2
Armour	2.33	2.33	4.67	4	3.33	3.33	5.67	5	4.33	4.33	6.67	6
Light Armour	1.67	0.67	3.67	3.33	2.67	1.67	4.87	4.53	3.17	2.17	5.47	5.13
Mechanised	3	1	5.67	4	4.8	1.9	7.47	5.4	5.7	2.35	8.37	6.1
Motorised	2	0.67	5.33	3	3.2	1.17	6.93	4.2	3.8	1.42	7.73	4.8
Cavalry	1.67	0	3.33	2.67	3.17	0.3	4.83	3.47	3.67	0.4	5.33	3.87
Infantry	2	0.67	5.33	3	3.2	1.17	6.93	4.2	3.8	1.42	7.73	4.8
Paratroopers	1.67	0.33	5	4	2.87	0.73	6.6	5.2	3.47	0.93	7.4	5.8
Marine	1.67	0.33	5.33	3.67	2.87	0.73	6.93	4.87	3.47	0.93	7.73	5.47
Mountain	1.67	0.33	5.33	3.33	2.87	0.73	6.93	4.53	3.47	0.93	7.73	5.13
Militia	0.67	0	4.33	0.67	1.57	0.3	5.83	0.97	1.87	0.4	6.33	1.07
Garrison	1.67	0.33	5	0.67	2.57	0.63	6.5	0.97	2.87	0.73	7	1.07
<b>SUPPORT BRIGADES</b>												
SH Armoured	4	7	11	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Armoured Car	2	0.33	3.67	3	2.8	0.33	4.47	4.2	3.6	0.33	5.27	5
Artillery	2.33	1.33	3.33	1.67	4.73	1.73	3.73	2.07	5.33	1.83	3.83	2.17
S-P Artillery	2.67	1.33	5.33	2.33	3.87	1.33	5.93	2.43	4.47	1.33	6.53	2.53
Rocket Artillery	2.67	1	3.33	2.33	n/a	n/a	n/a	n/a	3.67	1	3.53	2.53
S-P Rocket Artillery	3	1	4	3.33	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Tank Destroyer	2	3	4.67	2	2	5	5.27	2.1	2	6	6.17	2.2
Anti-tank	0.67	2.33	4	1.67	0.67	4.33	4.4	1.67	0.67	5.33	4.6	1.67
Anti-aircraft	0.67	1	3.67	1.33	0.67	1.4	4.07	1.33	0.67	1.6	4.27	1.33
Military Police	0.67	0	4.33	1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Engineer	0.33	0.67	4.33	1.67	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Comparison of Unit Type Combat Stats Over Time 1941-1944 (Assuming On-Schedule Tech Advancements & Timely Upgrades)								
BRIGADE TYPE	1941				1944			
COMBAT BRIGADES	SA	HA	DEF	TOUGH	SA	HA	DEF	TOUGH
 Heavy Armour	6.33	7.25	11.5	5.8	7.33	8.5	13	6.4
 Armour	5.33	5.33	7.67	7	7.33	7.33	9.67	9
 Light Armour	3.67	2.67	6.07	5.73	4.67	3.67	7.27	6.93
 Mechanised	6.6	2.8	9.27	6.8	8.4	3.7	11.07	8.2
 Motorised	4.4	1.67	8.53	5.4	5.6	2.17	10.13	6.6
 Cavalry	4.17	0.5	5.83	4.27	5.17	0.7	6.83	5.07
 Infantry	4.4	1.67	8.53	5.4	5.6	2.17	10.13	6.6
 Paratroopers	4.07	1.13	8.2	6.4	5.27	1.53	9.8	7.6
 Marine	4.07	1.13	8.53	6.07	5.27	1.53	10.13	7.27
 Mountain	4.07	1.13	8.53	5.73	5.27	1.53	10.13	6.93
 Militia	2.17	0.5	6.83	1.17	2.47	0.7	7.83	1.37
 Garrison	3.17	0.83	7.5	1.17	3.47	1.03	8.5	1.37
SUPPORT BRIGADES								
 SH Armoured	n/a	n/a	n/a	n/a	6	9.5	14	6
 Armoured Car	4.4	0.33	6.07	5.8	5.2	0.33	6.87	6.6
 Artillery	5.93	1.93	3.93	2.27	7.13	2.13	4.13	2.47
 S-P Artillery	5.07	1.33	7.13	2.63	6.27	1.33	8.33	2.83
 Rocket Artillery	4.67	1	3.73	2.73	6.67	1	4.13	3.13
 S-P Rocket Artillery	5	1	5.8	4.03	7	1	7	4.63
 Tank Destroyer	2	7	7.07	2.3	2	9	8.57	2.4
 Anti-tank	0.67	6.33	4.8	1.67	0.67	8.33	5.2	1.67
 Anti-aircraft	0.67	1.8	4.47	1.33	0.67	2.2	4.87	1.33
 Military Police	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
 Engineer	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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# Country & Scenario Guides

## GERMANY 1936 – 1938

Germany is always the favorite country to play. Why? Ironically, because they lost – gamers love a challenge! They also live for conquest, and who better... Germany has a challenging situation, surrounded by many powerful potential enemies. But Germany also has many advantages with regard to research, industrial strength, military potential, etc. Not to mention Axis members are able to declare war more easily, while the western powers are still figuring out the meaning of “threat.”

Most players, starting as Germany in peacetime, will want to build up for their own attempt at world conquest. Refer to Peekee’s Guide (page 8) for a process concept.

Your early, pre-war game will be driven largely by events and decisions which will push you in a historical direction. You can avoid these decisions, and be ahistorically peaceful, or you could rush these decisions and be ahistorically aggressive.

The Reoccupation of the Rhineland decision is the most complicated of a series of events or decisions which will lower your neutrality and allow you to start declaring wars. It currently requires 40 divisions (you currently have 39, I think) and a military presence in a large number of provinces along the French border. Helpfully, you have a four-brigade division, which you can break into two divisions to meet the first qualification. The second requirement demands that you send about half your army to the French border. You may as well leave them there as defenders, and use new construction armies to provide your invasion force in the east, if that’s your intention.

The Anschluss of Austria decision is easier, primarily requiring that you place spies into Austria to increase the organisation of the NASDAP (Nazi) Party there. They start at very low organisation, so you’ve got a ways to go. Don’t confuse the ruling fascist party with



NASDAP (historically, the Austrian fascists were actually more pro-Mussolini than pro-Nazi) – you must set your spies to “support our party” not “support ruling party.” Fortunately, you start with spies already in Austria, so this helps you along.

These two decisions will drop your neutrality by 8. Later, your Munich Pact decision will drop it further. But if you want to get into action sooner, rather than later, you will probably want to set some spies in your own country to reduce your neutrality. If you have specific targets, you could send spies to increase their threat.

Besides spies, which an aggressive Germany will need at first, you’ll also want to set some leadership toward diplomacy. Not only do you probably want to use some of your surplus diplo points to get trade deals, but while you can use your surplus points to get you through for a while, they aren’t going to last long if you’re influencing countries to either join your faction or to keep them from joining another. Germany must play this game, and it’s advisable that you keep about 6 points or more of leadership going toward diplomacy at all times.

Fortunately, your officer corps is sufficiently staffed to carry you through your first round of building. So if you assume about 9 points of leadership toward espionage and diplomacy, you have around 15 research slots

to assign. Hit doctrines, hit industrial techs, armoured techs, some air techs and infantry techs. Beyond that, you have a few options to use your discretion with. A typically played Germany won't have a lot of reason to research naval techs, but you may decide differently.

While you don't want to concentrate entirely on armour, you'll want to focus on units with speed. Motorised infantry, armour, armoured cars, and whatever other fast units you can research. Don't do cavalry unless you plan to go to war very soon, because they're not very useful in the type of combat you'll be in, and you can't waste a tech slot researching cavalry techs. You might build some garrisons to guard your coasts and maybe the French border (no need to research garrison techs – as combat testing showed, their only useful combat value is defensiveness, and even a full panel of research on them won't increase their defensiveness much).

You would be well advised to start working on some submarines to help sink British and French convoys when the time comes, though it might be best to spend just one or two research points getting your sub techs up before building. If you do want ships for convoy raiding, or to keep the Royal Navy on its toes, then start building them early. Same with aircraft units – they'll take a long time to build, so it's best to get them early and upgrade. But you can partially fund them and drag out their production times. If you don't have a particular strategy planned around a navy, you should consider canceling one or more of the naval units being built in your queue at game start – that IC may be more valuable building other things.

If you underfund upgrades (about a third of requests?), and overfund supplies (the stockpile will come in handy later), and perhaps put a modest amount into extra consumer goods to raise money, you should end up with between 45 and 60 IC for production. Fill up those slots with the things you know you'll need for war. When your tech allows it, it's good to put at least one or two factories into the queue, to build your economic potential in these days before the war takes all your attention. When you get to place these factories, make sure they're placed well away from your enemies' potential bomber range (perhaps nestled between Poland and Czechoslovakia?).

This is a matter of preference, but you might want to strengthen and extend your forts along the French border, as well as (people miss this!) adding coastal forts along your Atlantic coast (make sure you have garrisons built to man them).

It's good to intervene in the Spanish Civil War, because you gain a potential ally for later. However, many players prefer to invade Spain, rather than ally with it, and in these cases you'll not want to help the Nationalists defeat the Republicans. You are allowed to invade a Nationalist Spain, but it's so much more fun to invade a Republican Spain!

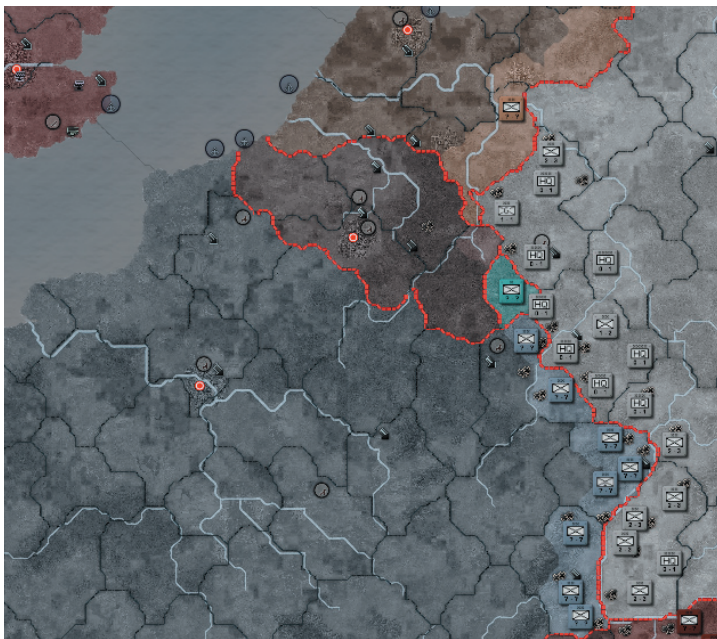
Strategically, and geopolitically, the historical path Germany took to power was well thought out. Once Czechoslovakia's out of the way, HOI 3 makes Poland easy with the Molotov-Ribbentrop Pact. Though some players may prefer to try to launch either an amphibious or paratroop invasion of Britain early on, France is generally the logical choice toward the west. In v1.1c it's possible (but bloody) to punch through the Maginot Line. But the historical choice of going through the low countries (Netherlands, Luxembourg, Belgium) makes sense to bypass the main fortress complex.

If for some reason you prefer not to make a deal with the devil Soviets, then Poland can become a buffer between you and the USSR, and you can strike west against France to defeat the enemies at your back before you turn against Stalin. Alternatively, you could pursue a Balkan strategy, making diplomatic overtures toward these countries and perhaps invading Romania to get the oil reserves there.

Anytime you're at war with Britain, it does make sense to follow Germany's historical move against Denmark, and perhaps Norway too. This protects your access to trade with Sweden, while at the same time preventing access to the Baltic Sea, which limits British strategic options on the offense. If you've fortified your Atlantic coast, this would pretty much ensure against a successful invasion anytime soon.



## GERMANY 1939



For the most part, instructions for Germany in 1939 are identical to those given for the 1936 & 1938 scenarios, except forget about any peacetime buildup and concentrate on your fully military needs. Look back to the instructions given for 1936 & '38.

The difference in 1939 is that you're committed to war, you need to knock Poland out quickly so you can pay attention to other fronts, and you probably have the French trying to jump over the fence in the west. With the forces you have bordering France at game start, you can probably hold them – concentrate on finishing the Polish war successfully, then immediately make France your first priority. Alternatively, you could try a long-shot invasion of Britain while you hold the French along the border, but this is very risky, and is entirely a matter of preference. Most players will choose to defeat France first because this gives you good bases against Britain, and takes a lot of the pressure away.

Once you've defeated France, and (presumably) have gotten the Vichy event, you have opened a front against British (and possibly Free French GIE) colonies in Africa. If Italy joins your war, then you have direct access to Egypt, and Afrika Korps begins...

One day, you may find that you have little enough to do that you can turn your attention against the USSR. This isn't a bad idea in concept – they're a hostile faction, despite your non-aggression pact. But the timing is tricky, not just because of weather, but because you want to make sure your back is really, really secure. A two-front war between the Allies on one hand and the Soviet Union on

the other isn't going to be as easy as balancing Poland and France. Watch for the signs, plan ahead, and launch when all the lights are green.

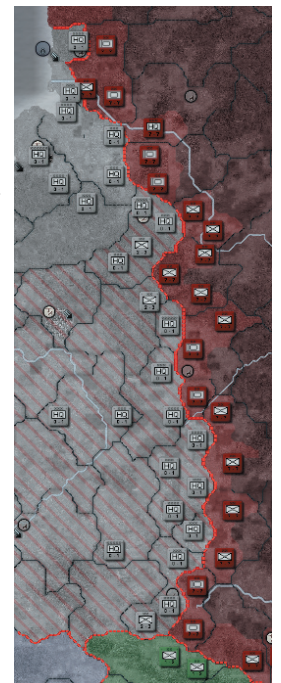
You still have time to play a diplomatic game with the USA. You're in good shape if you can keep her from entering the war against you. If you're at war with the USA, or if you decide you want to take her on via your own initiative, well... You're on your own. There are a dozen different options for waging war against the USA. None of them offer any assurance of success. Use the Strategy Guide to help you toward victory by attending to the basics.

## GERMANY JUNE 1941

The Italians have surrounded the British at Tobruk, in North Africa. But you don't actually control any of the forces on the ground there. Your situation in the Mediterranean is tentative until and unless you gain a naval base there, and can deploy ships.

On the Atlantic front, you need to keep your U-Boats operating, try to knock out the British airfield where they're basing their strategic bombers (one of their major threats to you), and keep your air patrols going. Try to keep ships on the alert so you at least know when/if the British are going to try to invade your coast. You're committed, at scenario start, to war with the USSR, so an invasion of Britain should be the last thing on your mind. If you're really good at this, and the Soviets bore you, then you probably already have an idea of how to wage both wars at once.

In the USSR, simply follow the breakthrough strategies noted in the Strategy Guide, as well as the expansions upon those strategies noted in the first pages of this Supplement. Be ready to form a defensive line as winter closes in. Employ those strategies successfully and you'll carry the day. In Terrain Mapmode, make sure to eyeball the Pripet Marshes (you'll see them a little way into the USSR near the center of the front), and make sure not to aim your primary breakthrough thrust toward them. Otherwise, go for it.



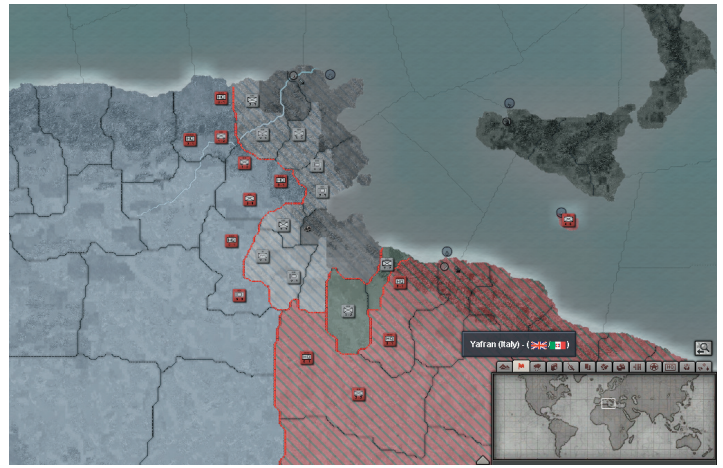


## GERMANY DECEMBER 1941

On the USSR front, it's winter. Leningrad is a tempting target, but the Soviets have a lot of strength in the area, and they could try to crush your salient if you weakened one front in favor of mounting an attack upon Leningrad. Moscow is another tempting target, but the Soviets are strong there, too. Wait to either shift more divisions, or until the weather warms up and you don't have freezing temperatures or mud to deal with. In the far south is where your offensive operations should concentrate – Sevastopol should be an easy capture, and make sure you hold the straits at Kerch (at the entry to the Sea of Azov).

Protect your Atlantic coastlines, patrol with airpower (and with naval pickets if you dare), and work on a naval strategy (U-boats presumably) to strangle Great Britain. It will take them a while to get organized, but eventually the USA may decide to join the war against you on top of their war with Japan. They don't automatically start at war with you (historically, it was Germany that declared war upon the USA). If they do, expect their troops to show up on your doorstep – France, Norway, Africa. Maybe even near Hamburg. Be prepared.

And I don't know how the Italians managed to get so many of their divisions surrounded by so few of the British around Tobruk, but if you lack confidence in their ability to break through to free their units, you might consider flying some paratroops in there to take charge. Careful to maintain an "exit strategy" in case things get too hot – you don't have ships in the Med, so you'll have to fly them out in an emergency.



## GERMANY 1943

Your forces (and Italians) are becoming trapped in Tunisia between the onrushing Americans on one front, and the onward marching British on the other. You need to decide early on whether you want to try to preserve your hold on Tunisia, or if you want to give up and evacuate. If you want to evacuate, then you'll need to hold long enough to build and deploy some transports to the Mediterranean (unlike earlier scenarios, you now have access to a couple of Italian ports, as well as to Sevastopol). If you're brave enough to try offensive measures against the encirclement of Tunisia (not a bad idea – you're likely to lose if you don't break out), Kasserine is the obvious center of your breakout attempt. The Allied forces are exposed, there, and they're relatively weak throughout the whole area.

The Soviet front will be either a battle of breakthroughs, or of attrition. There is no obvious place where you hold the advantage against the Russians. If you can, it would be nice to be able to break through and rescue your pockets of troops which have been trapped close by your frontier (Stalingrad is beyond hope, and can only be useful by drawing troops away from the main front). Leningrad seems like it might be easy to overwhelm, but your balance of forces there is not in your favor if you count those Soviet divisions close enough that they could make trouble if you went after Leningrad.

Naturally, watch your coasts for invasion and continue your war against the enemy convoys and bomber fields.



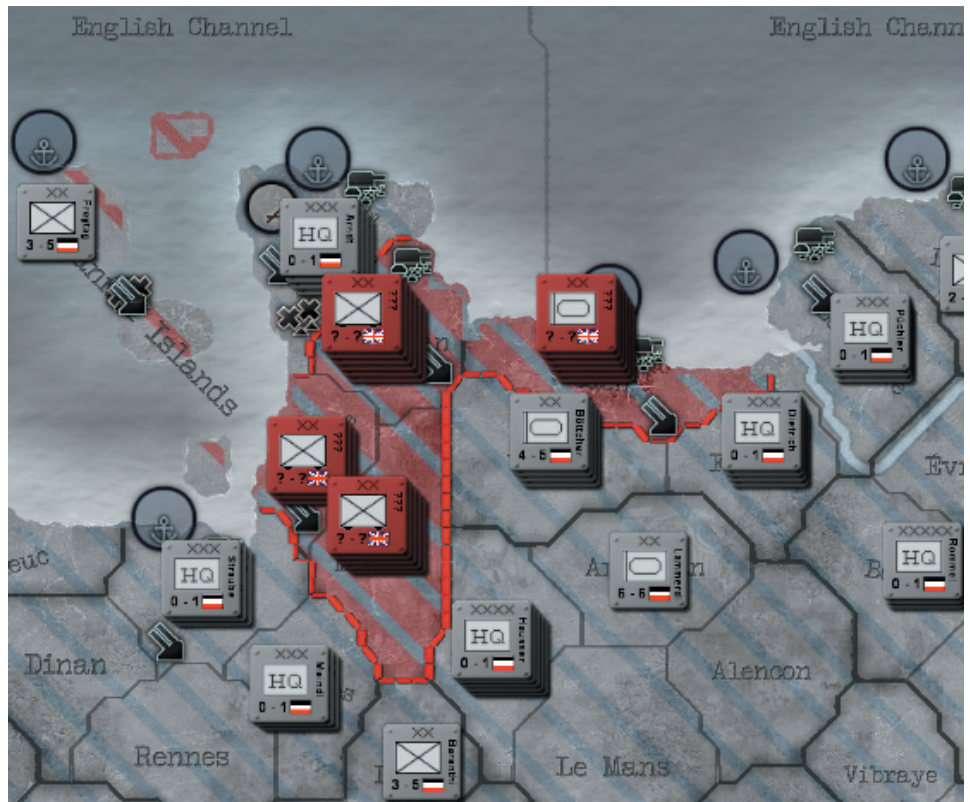


## GERMANY 1944

Obviously, Germany's number one priority must be to kick the Allies out of Normandy. This will be difficult, as the enemy controls the sea, and can land more units on the beachhead. The fortunate thing is that they have supply difficulties, and there's no point in them bringing more troops before they have better supply (which means capturing your naval bases). You're actually best off if you can pin them in their places, not allowing them to make the first offensive moves. Put pressure on them while trying to bring your own reserves from elsewhere in France, but be careful not to open another naval base where the enemy could land. Your major disadvantage will be in airpower.

A war of attrition – a slow stand-and-retreat style campaign – in the mountains of Italy is your best bet there. Watch for opportunities – stupid moves by the Allied armies, or subtle thinning of the enemy lines. But you're not going to have the strength to mount a sustained counter-offensive, so be careful what you commit to. The more you lose while mounting counterattacks, the less you have to wear the enemy down as they push forward. Italy is easy to defend across its narrow width – don't let the enemy turn your flank. Use strategic withdrawals if you must, though those are costly in terms of the limited distance you have to retreat into.

In the east, you hold strongpoints, but you possess no obvious places where you could mount a counter-offensive against the Soviets. You might consider drawing back portions of your army to create a punching force – something that can break through at a point of your choosing and try to penetrate the Soviet lines. However, a careful strategist might instead urge a defensive battle. Let them wear themselves down and create opportunities for you as they shift their units for battle. One advantage – perhaps one of the few – you have is that as the lines inch back toward Berlin, the poor supply situation your armies have been dealing with for three years become a problem for the Soviets instead.



## UNITED KINGDOM 1944

It's unlikely any of your outlying provinces are going to be attacked – the Axis is mostly beyond useful offensive work at this time, except on the existing battlefronts. Your outlying provinces should be set to not reinforce or upgrade. Some HQs can be disbanded.

Active battlefronts are in Normandy (France), Italy, and Burma. In Normandy, follow the white paper on D-Day from earlier in this guide. Another section earlier in this guide should provide some ideas for Burma.

In Italy, there's a hole in the center of the German line, with the existing deployments only showing 1 division. Go for it, with all you've got, and perhaps pin the flanks. Other movement is not as likely to produce movement. Problem is, the Germans have defense in depth – to some degree, at least. It will be very difficult to perform breakthrough warfare in Italy, not just because of the mountainous terrain which makes armoured operations difficult, but also because there's not a lot of room to maneuver, and even if you do break through the line, there aren't a lot of provinces in any direction you can cut off.

Strategic warfare is important -- keep your convoys protected, and keep pressing your bombers to destroy the German economy.

## UNITED KINGDOM 1939

Advantages and obligations – the UK has a worldwide empire, which is both a blessing, and a curse. You have to defend it all, but it also means you have a lot of resources, and your navy was built with the intent of defending your vast holdings. As Prime Minister Churchill once said, “Only the navy can lose the war, only the RAF can win it.” Remember this, as the war starts off.

You should be able to manage at least 15 research slots, unless you want to place a large number of leadership into espionage (I can’t recommend this – if you have a strategy, go ahead). Pick your preferred land doctrine (according to style – Grand Battle Plan was meant to be British, but if you don’t play that way, choose something else), and Sea Lane Defense naval doctrine, but throw in some light cruiser and destroyer doctrines from other panels. Concentrate on infantry panels at first – Britain will probably never use more than light or medium tanks. Work primarily on escort techs for naval (the Germans and Italians will not be able to contest your naval superiority at first – if you see them researching in that direction, you might reconsider heavier naval techs). And focus on aircraft techs – interceptors, strategic bombers and tac bombers. Marines would be nice, too.

Your construction should heavily favor aircraft and light naval units – convoy escorts, convoy transports (you’ll need replacement convoys), destroyers, light cruisers, etc. My recommendation would be that you concentrate primarily on infantry as the core of your land forces – don’t get fancy, because that’s expensive, and as poor as Britain is, and with so much of her concentration going toward naval and air production, there won’t be much left for land units. If you have a feeling your enemy is going to invade (if you know your multiplayer opponent, or if you have a “feel” for the AI), you might pick garrisons for your naval base provinces in the home islands. Remember not to ignore the defense of the Middle East just because it didn’t become a major theatre historically – multiplayer opponents and computer AI may decide it’s a rich target. Be ready to defend Egypt if Italy enters the war. And it’ll be hard to fight in Europe while still paying attention to the threat of Japan in the far east, but don’t ignore the threat there either. Keep an eye on them. Maybe even approach them diplomatically, in hopes they won’t attack you (how much do you really care if they go to war with the USA, so long as you don’t have to fight them?).

If you think you have a contribution to make against a German invasion of France, then you could try sending a force across the Channel to back them up. But the French position is relatively strong, and it’s questionable how much your addition would help. Consider, instead, a quick strike against the German North Sea coast. Be ready to back it up if you commit – if you distract the Germans enough that they decide you’re more of a threat than Poland, they may send a large army to throw you into the sea.

Use your naval superiority as your way of deploying mobile forces across the globe to wherever the Axis threatens. If they attack Greece or Denmark, be ready to move. If they end up in the Mediterranean (with or without Italy), be ready to counter them there. Your best advice is not to get stuck in land combat with the Germans unless it’s your early strike against their coast, because that’s where the Germans excel. You want to be able to rush in where you’re needed along the coast, and you need the flexibility to be able to evacuate along the coast if things get hairy.



## FRANCE 1939

At war start, you’ll only be able to squeeze about 5-10 research slots out of your leadership points, so don’t waste them on “wild research adventures.” Infantry research is your best bet, because that’s mostly what you have. That’s mostly what you should build (and garrisons). And don’t worry so much about your navy – you have everything you can handle on your frontier. You probably won’t have time to build airpower before the Germans attack you (or



before you aggressively attack them!), so unless you're sure you want a long term game (or you've fought the Germans and the front is stable) don't worry about building aircraft. Upgrades and reinforcements are very important – set them to half-funding to get them out of the way quickly (you don't have enough IC to fully fund both). You've got to get those reserves up to strength before he jumps the wall.

Don't make the mistake of leaving your Belgian border exposed. You won't have time to build forts, but you can move some of your infantry up there and build more garrisons and other infantry to cover this region.

Some players decide to “rush the border” with Germany at game start. This can be costly, attacking across a river into mildly fortified territory, but if you succeed there's every chance in the world you could turn it into a slowly (or not so slowly) expanding occupation of southern Germany (your best chance of crossing is near the Swiss border, partly because you can turn their flank without exposing anything to the rear).

If you decide to wait for the Germans to take the initiative, continue building a defense in depth behind the Maginot Line and along the Belgian border. Don't forget about Italy. If you're sure the wait will be long enough (if they're having trouble in Poland, for instance), you could try to slip an aircraft order in there, but I can't realistically expect it's possible.

If the Germans press their attack against you before finishing the Polish campaign, so much the better! Fight a war of attrition, with strategic withdrawals – they do not have the strength to fight on two

fronts at once in 1939. You'll eventually wear them down, or they'll expose a flank or hole somewhere.

## UNITED KINGDOM 1943

At game start, in February of 1943, the only remaining Axis stronghold in Africa is Tunisia (and it's your only active land frontier in Europe). You have some French & American units as expeditionary forces. You only have enough strength to advance in the south – about from Kasserine east into Libya. You'll have to just hold north of there, until you can defeat the south and consolidate your forces.

Move your airpower from Egypt and Palestine into your nearby airbases – the Germans and Italians have a fair sized air force in the region, and you'll need to start fighting them immediately. Split your airpower into like-type units, with the naval bomber in a unit by himself doing paltry ground attack missions until there's something to hit at sea. Hitting their airbase is not a bad idea – without it, any damage your fighters inflict will last long enough to matter. In fact, that might be the only way you'll win the air battle here, because you're outnumbered – if you can repair, and the Axis fighters cannot, then you'll have a better shot at winning in the long run. Pound that base, and watch it as it repairs, so you can keep it pounded, in between ground attack missions. Make sure to withdraw individual airwings and rest your planes in a rear area when they take too much organisation damage – that's how you win a war of attrition in the air.

Nalut is your most obvious starting point, as it's “exposed” – you can hit it from three directions at once. Then you'll outflank the units in the north, though don't let that delay your attack against Rass Ajdir, to the north, because you have enough strength to get a good head start in that battle, waiting for your forces from the south to catch up.

Once they do, Tunisia will not hold out for long unless they make smart strategic withdrawals. After the Axis collapse there, your job becomes deciding where to move forward. You can check enemy troop deployments by sending destroyer scouts forward to check. You should scout the whole French, Italian, Yugoslav & Greek coastline, making sure you know the lay of the land. Also note where the enemy navy is based.

You have a choice – do you first capture intermediate stepping off points, like Sicily or Corsica, or do you go straight in for a landing in France, Italy or in the Balkans (or Spain, if they're Axis in your war)? By capturing the Mediterranean islands first, you eliminate bases the enemy can use against you. But taking each one takes time. Will the enemy build



up his forces to oppose you on the mainland while you're busy taking over islands? Or is he already strong enough on the mainland that he'd throw you back into the sea if you invade without more extensive preparations? Many things to consider.

There are three ports right together in southern France – Nice, Toulon & Marseilles – which should seem tempting. Marseilles is the only naval base of sufficient size to really support a major invasion. But that's also why it will probably be the most heavily defended. Each of these naval bases has a small coastal fort, though none of the other naval bases along the Axis coast do at scenario start. To the east, you'll find Savona and La Spezia – both large bases. Down the Italian boot, you'll find Napoli, and then in the heel is Taranto. Taranto is another major port. Napoli is somewhat smaller, but will do. Inside the Adriatic Sea, you have Venezia, which is a major port, and Trieste and the Split/Zadar complex, which are smaller bases. There are a couple more ports further south, including a large port at Athens and not a bad one at Tirana, Albania, but the more south you get the less useful it is as an invasion point. Landing at Athens allows the Axis to trap you on a small, mountainous peninsula. A breakout would likely be much worse than the historical campaign through Italy.

Landing in southern France has the advantage of giving you mostly clear terrain – not too much beyond hills or woods to fight in, which means you might have an easier time expanding your beachhead. On the other hand, the enemy can come at you from any angle. The reason the Allies historically landed in mountainous Italy is that they felt confident they could manage a short front like the boot of Italy offers. Landing in Greece or Yugoslavia might face fewer defenders at first than either of the other mainland options, but you get the worst of both worlds – wide open fronts combined with province after province of mountains.

Do you try to pull a surprise, and invade southern France from your base in Algeria before even bothering to crush Tunisia? It's incautious, but it might work. You might even lose North Africa by stripping troops away, but if you acquire a good beachhead in Europe, it might be worth it. Risky. But worth a moment's thought.

Burma is your only other active land front. There's nothing special about combat there, though. Just remember that section from earlier in this guide, where the shortening of lines is discussed.



## JAPAN 1936

Historically, there was a three-way conflict in the minds of the Japanese political and military staffs. Should Japan's primary enemy be China, the USA, or the USSR? In many ways, this was broken out into the army faction and the navy faction. The army faction wanted to go after China, and perhaps build that into a base against the Soviet Union. The navy faction, despite Admiral Togo's famous defeat of the Russians in 1905, had very little interest in war with the Soviets.

In many ways, the navy faction was more "correct" in its outlook than the army. Japan is a resource-poor country, and cannot expect to be a modern military power without either trading for more resources (which is difficult when you don't have much to trade), or conquering lands with those resources. China has a fair amount of resources, and that's partly what the army faction wanted to go after. And it's true that the USSR has some oil resources located nearby, just north of Japan on Sakhalin Island and on the mainland coast. But overall, China and the USSR each pose an enormous challenge to Japan to conquer, and you'll more than use up the resources you gain from conquest in building an army to take them! Many Japanese leaders believed the invasion of China was a mistake, and later wanted to back out of the war, but could not do so "with honour." So the historical Japan was stuck.

Because of the vast resources there, a good argument can be made to go ahead with invading China anyway. But you'll have to be committed to it, and will have to make your strategic moves carefully, not haphazardly. China's resources are pretty spread out, and if you want the resources, you'll probably need to conquer most of it, which will be difficult in low-infrastructure territory. For more information on how to fight a war in China, I'll refer you to the Japan 1938/39 section.

But if Japan wants to survive, she has two choices – remain peaceful, or go for broke. If you decide upon war, your main target must be the oilfields and other resources of the East Indies. Southeast Asia has some good supplies of Rare Materials, which is good. But you also need Crude Oil. You need a lot! A good mix of resources will be helpful. The Malayan Peninsula (which stretches



south to Singapore) has a lot of both Oil and Rares. And the Netherlands East Indies have approximately the same. Theoretically you could go after either the possessions of the UK or Netherlands. The fact is, you'll probably have to go against both at once unless the Netherlands somehow joins the Axis (which can happen, and which makes things very interesting for Japan). Once you're at war with the UK, and once you're able to stretch your reach that far, India also has a few very good resource provinces.

If you do join the Axis early on, it potentially puts you at war with the UK and France earlier than you expected. Perhaps even against the USSR. You'll lose the ability to choose the day war begins, but it also may be a good thing. It may allow you to seize French Indochina, the Dutch East Indies and the British possessions nearby without going to war with the USA (these invasions were historically the reason war with the USA was chosen – it was believed the US would not stand by – but if the war happens as part of a factional war, things may turn out differently).

Not joining the Axis until after war has begun allows you to move forward in a more historical way. It allows you to choose the time war begins. But it may also bring you into conflict with the USA.

Starting in 1936, when we talk about “China” we're really talking about Nationalist China and all of her allies, which is pretty much all of eastern China. They may not have gotten along with each other, but when a foreign aggressor shows up, they recognize their common interest. When war comes, there's a good chance it will come with all at once. So be prepared. Sometimes one or

more of these countries attempts to join a faction (Communist China will try to join Comintern, and often does, but that's not a concern unless you declare against them directly).

Again, see the next section for more information about fighting the Chinese in their homeland.

## JAPAN 1938/39: COMBAT IN CHINA

At game start, you are at war with Nationalist China and Guanxi Clique. You've already annexed Shanxi, created Mengkukuo as a puppet, occupied much of eastern Nationalist China, seized Taiwan, and occupied small enclaves along the coast.

You have several divisions of cavalry and infantry screening Communist China, with which you are not at war, and Xibei San Ma, which is a Nationalist puppet. It's tempting to go to war here and try to shorten your front, but the Communists have a large army, and the Nationalists have a fairly large presence in Xibei San Ma which is isolated there until and unless you bring Mengkukuo into the war (she's a neutral puppet of yours, similar to Xibei San Ma). It may be best, overall, to leave this frontier quiet and either leave the screening force there or borrow from it sparingly. If you attack the Communists, be ready for a tough challenge at first.

China is also very rugged, with whole sections of the country either being mountainous, or being separated from the rest of the country by mountains. The coast is generally a plain, and it's the most accessible part of the country. This makes for challenging combat modifiers, and sporadic supply.

Look at the infrastructure mapmode for China, and you'll notice most of the country has about 30 or 40 percent infrastructure. Your own base in Manchukuo is not helping – 30 percent. Units operating on the Chinese inland will often face the situation of being out of supply, which is dangerous. Plus, there's nothing more frustrating than winning a battle, and the division(s) you wanted to advance cannot because they're out of supply!

Your lifeline to supply and the modern world will be through ports along the coast. These same conditions limit the Chinese supply lines too. Your advantage is that you have a sizeable navy, and can land at any point on the coast you want (preferring naval bases, ob-



viously), so long as you can defend that location.

Make full use of your navy – protect your supply convoys, and be ready to use heavy duty shore bombardment where it's most useful. Bring in carriers for air support. Launch localized invasions.

Your victory here will be achieved on offense. Attack where your odds look good, defend other places. Look for flanks you can turn (on a strategic level – taking over new province facings so you can attack neighboring units from another direction – review the Gradual Constriction section, near the beginning of this Supplement). Don't wait – attack during the first hours. Don't leave the Chinese any opportunity to dig in!

Your air assets in Taiwan can reach some of the locations along the coast (if you are having trouble, make sure tactical bombers are kept in separate units from shorter-range interceptors or multi-role aircraft). Move your airwing from Manchukuo (where they're useless) to Nanchang (a newly captured airbase) so you can give air support to the nearby units. Expand this salient around Nanchang so they don't take your only airbase in the region!

Take Guangzhou at all costs. Bring out your heavy battleship guns and some air support from your carriers. Get that naval base, then start pumping supplies into that area so you can expand your bridgehead in the region. Once you've made some progress leave some screening units behind to keep an eye on Hong Kong – no telling when the Germans might take you into war with the UK.

Let the units in enclaves along the coast remain and dig in until you can find a way to support them. You need more ports along the coast anyway, so it would be a good idea to start building a couple of naval bases (a couple of airbases wouldn't hurt either, but you don't have much IC). But those ports won't be ready before these enclave troops are in danger, so the escape plan will probably involve delivering large numbers of troops from outlying stations to Guangzhou, where you can mount a strong offensive northward along the coast.

Watch the Chinese divisions for movement arrows, signaling a possible attack. Spoiling attacks on a portion of these attacks could ruin their coordination and leave what the enemy thought would be a favorable battle turns into an attrition trap for them.

Be mindful of the differences in strategy for the "Independent Mixed Divisions" – divisions the Japanese deployed with a brigade of infantry, a support brigade of

artillery, and a support brigade of engineers. Its combat width is only one, so it doesn't look like much on the battlefield, but it packs a punch which is stronger than you'd think one width would deliver. It's a multi-purpose division, but one which is best used on the defense and in multiples so two or more mixed divisions can support each other. As I mentioned, it does have significant combat power, but it is relatively fragile. They will fight like a junkyard dog for a while, until the strength or organisation of the infantry brigade is exhausted, and then (before then, actually) it's time to pull it back. If you can manage the numbers to have two or three of these divisions together, you're in much better shape, but that's not how they're initially deployed.

Don't start using strategic redeployment all over the map. Your supply lines are tentative as it is, and if you add the strain of doubled supply usage for SRing units, you may put some of the guys you're trying to help in extra peril. There's been talk about whether SR actually uses less supplies overall because supply usage will be doubled over a shorter period of time. The argument makes sense, though I think it may be balanced (in China, anyway, and other places where supply is in doubt) by the fact that your units are using SR along a supply route that's already strained to the limit.

Ultimately, China is a war of attrition. You can make some strategic moves to encircle and destroy the enemy, but combat is usually too slow to do a lot of that. Destroy the enemy's army, or make it ineffective by repeatedly defeating them and pushing them back. Maintain the initiative and keep driving. Eventually, you may conquer enough of their centres of population, enough of their resources and factories, and destroy enough of their troops that their manpower collapses and they lose the war.

Don't remove too many forces from important outlying stations, especially from islands. You don't know when you might be at war with the Netherlands, Britain, or even the USA. You'll need to have garrisons on your important islands to prevent a surprise invasion against you.

Though China is an important concentration during these years, remember that Japan's fate will be decided at sea. If you build land units, build infantry, garrisons or marines, nothing more expensive or technical. You need ships and planes – lots of both! If you do build garrisons or infantry for use in China, redistribute them to Pacific islands before going to war elsewhere.





## JAPAN DECEMBER 1941

Your situation is a tough one, forced upon you by necessity, as is success, for the alternatives are too horrible to contemplate. HOI 3 doesn't, frankly, make it any easier on you.

You will start your scenario at war, with six fleet carriers and twelve CAGs within range of Pearl Harbor. However, tell yourself before you launch your strike that you're not going to achieve the massive success of the historical attack in a few hours. For gamebalance reasons, the rate of destruction of ships and bases is kept standard throughout the game, and to prevent an unrealistic crushing of the UK during the Battle of Britain, certain values have undermined your ability to perform historically against Pearl Harbor. Be warned, there may be significant changes to CAGs and/or the Pearl Harbor situation by v1.2, so this advice may not work in later patches.

But that's okay! You can still do what you need to do, and you may even get to throw the American carriers into the mix. If you still want the historical outcome, I'm sure a modder will have produced a "historical outcome" event within a week or two, and you can install that to get what you want.

Your best advice with Pearl Harbor is "go big or go home." Well, not go home, per se, but go elsewhere. You're risking your carriers so near the American fleet. To do that you need to expect good results, and you can't get that unless you are prepared to "camp out" for a few weeks near the Hawaiian Islands.

You should assign 3-4 CAGs to each of a number of missions (don't send more on each, because the stacking penalty will start to make your attack ineffective – besides,

you may end up in battle alongside CAGs you sent on a different mission, and you don't want that stacking penalty to be too high either – see the chart on airwing stacking penalties at the end of this Supplement).

Elsewhere...

Go back and read the comments in the 1938 and 1939 Japan sections to see general advice in China. Nothing much has changed.

You have the option of declaring war upon Thailand. The Japanese historically did invade at Pattani, and forced the Thais (after brief conflict) to allow them passage along the west side of the Malay Peninsula toward Singapore. This isn't a very practical solution in HOI 3, not just because there's no port at Pattani, and because you could just as well land more troops at Kota Bharu (it was historically the 5th Hoheishidan, but it's located in a place that can't embark troops – go back to Saigon and get either the 2nd or 21st Hoheishidan), but also because Thailand is a useful buffer between you and the British in Burma. Events (modded or otherwise) may still allow you to force Thailand into alliance with you, but this additional front with Britain can be problematic.

Remember you have paratroops in Saigon. The only thing they have the range to reach is some of the provinces north of Singapore, but if the British move forward and stop you north of this major base, you could maybe use some reinforcements or a surprise landing to their rear. Otherwise, fly the paratroops to Singapore once it falls, and use them to seize objectives further out (like the port at Kuching in Borneo, or any of the three naval bases in Sumatra or Java).

Your units around Guangzhou should be strong enough to take Hong Kong. Be careful not to lose Guangzhou to the Guangxi while you're busy in Hong Kong.

There's a transport north of the Philippines with troops which you can put anywhere. I would recommend checking out the island with your ships or the planes on the carrier Ryujo (located south of the Philippines). Find if there's an unguarded naval base somewhere and pounce on it. Otherwise, land adjacent to it and start a battle while the transport runs back to get troops for an amphibious invasion on the same base – the combination of land and sea invaders will probably dislodge the defenders.

You have a small invasion force just off the American island of Guam. Even though the fleet at Guam is called the "Guam Unit," there's no reason you couldn't

send it on toward Wake Island and use the forces from Palau to invade Guam. You should prefer to take as many central Pacific islands as you can, so the USA doesn't have a base to use to transfer its fleet from Hawaii or California.

You also have a transport and a division at Palau, a Japanese base near Guam. These troops were historically used to invade the Philippines, but you can use them wherever you want.

The few transports you have are going to get a workout. Once you've successfully landed your troops, unless there's some reason you think you might lose a battle and need to have them removed, go back to Southeast Asia, or somewhere else, and grab more troops for another invasion elsewhere.

Lastly, you still have two escort carriers located at Hiroshima's naval base. You could decide to send these out to assist with secondary invasions. Not all of the historical invasions happened on the first day (or even in December!). You'll have plenty of time to make use of all your transports, divisions, carriers and even paratroops.

Thinking long term, ultimately victory will require well-managed fleets and naval and land-based airpower. Use garrisons (lots of them) to defend your islands and airbases, load these bases up with AA and interceptors, and wait for the USA (or whoever your main enemy is) to come calling. This is *not* to say fight a defensive war – quite the opposite – but realistically there's only so far you can expand in the Pacific before you have to start facing enemy counterstrikes. Always reach for more, but first and foremost make sure you hold everything you take. Strategic withdrawals are not as practical at sea, and you have limited geography across which to retreat. You need to use your fleets and airpower for “area denial” – keep your enemy out of your rear areas and keep stretching out your hand to take the battle to him where you see opportunities. If you beat back his every attempt to retake these islands, eventually the Germans or someone else may become a higher priority, or perhaps even you may be able to win this war of attrition.

You must win it, or be crushed in the end.

## USSR 1941/1943/1944

There's really not much to say about the USSR's war with Germany. The Strategy Guide covered the key points, and many of those key points are tailor-made for the eastern front. Build defensive lines, build them in depth, watch for weak points along the frontier and exploit them with breakthrough attempts, exploiting breakthroughs into envelopments. This formulaic game of thrust and counterthrust starts in June of 1941, when the Germans cross the Brest-Litovsk line, and ends when either they capture Moscow (potentially later, but that's a bad sign), or you capture Berlin. It's not overly complicated. It can be tedious... but it can also be the absolute best division-level combat experience anyone has had in any game, bar none!

The Soviet Union doesn't need to worry much about diplomacy except during the pre-war years, and doesn't necessarily need to play the spy game either. Worry some about your officer corps. But altogether, you should be able to put 10-15 points of leadership toward research. Your research should concentrate on doctrines (don't get locked into just one – there are several doctrine techs that will benefit you, so go re-read the tech paragraphs on doctrines!), and improving both, infantry and armour. You also need to have the absolute best interceptors, close air support and tac bombers that can be researched – victory in breakthrough battles (yours or theirs) will often be determined by whose airpower was most effective. Forget about the navy. Industrial techs like Industrial Production, Industrial Efficiency, Oil Refining, Coal to Oil Conversion (the USSR may be oil rich, but if you're building tanks, your supply needs to be augmented), Agriculture and the Construction Engineering techs are all important. You need to expand your economy, you need to manage your resources on the long-term, you need to be able to improve your infrastructure, and you need manpower. This war may be won as much on the factory floor as it is on the battlefield.

You must keep your units upgrading and reinforcing. This may seem a little overwhelming at the beginning of Operation Barbarossa – you have probably three million men needing to find their reserve units and start fighting. But it's important. Not keeping up will lose the war. Partially fund to the degree that you're able, so that you're always closing in on that “zero need” number as a target. But don't ignore construction. You need new aircraft and new divisions. Consider the cost-to-benefit chart very carefully before preferring to build mechanised over motorised infantry – it may not be worth it.



In the Barbarossa scenario, pull some of your divisions off the line in the first day and use them to create a defense in depth. Pulling more allows a 3rd line.

If you're starting in the 1943 scenario, don't worry so much about Stalingrad. They're stuck there, and even if they use what few supplies they have left to break out, where are they going to go? You've got units nearby – probably a lot more than you need – and you can challenge them long enough to run their supplies out and cause them to sit and rot. In a situation as bad as they're in, there's nothing they can do to get out of the encirclement. It's a matter of how they choose to die, and none of those choices pose much threat to you. I'd advise you to move about half of your units (move them by corps, not willy-nilly) out of the area, and screen Stalingrad with the rest until after 30 days is up. Then (or sooner if you like – their supplies won't last long in combat) jump in and destroy them as efficiently as you can. If you start to suffer serious losses, pull back and try again later. The 6th Army is not going to regain any strength or any organisation, so you'll come back to the battle fresh, while they're still smarting from the last time.

## USA 1941/1943/1944

The United States has some serious penalties which should prevent it from playing too strong a role in the early years of the game. However, it's an economic powerhouse, and so when it finally joins the war, it will play a commanding role.

Whether you're playing in the December 1941, 1943 or 1944 scenarios, your strategy is not going to change a great deal. At game start in the 1943 and 1944 scenarios, your armies in Europe will be under the control of the British (check the UK 1944 section about how to arrange these fights, get your expeditionary forces back, etc.), so you're mostly concerned about the Pacific war. If you start in 1941 and later involve yourself in Europe, of course you'll be in control of your units and you'll need to consider where the best places are to attack. See the UK 1943 and 1944 sections for advice that easily translates to the US invading Europe.

You could also read the Japan 1941 section, and benefit from reversing the advice! Your goal is to industrially overwhelm Japan, to build battlefleets with serious air cover which can penetrate into the Japanese island domain and beat down their naval and air defenses first, then send in the marines to destroy their garrisons

under cover of bombing strikes and shore bombardment. In a way, it's very simple.

Don't think you need to retake every little speck of island in the Pacific. The Japanese can't "grow" divisions or air units on these islands – they have to transport them, and if you have control of the air and sea, they can't do that. Isolated islands become pacified islands unless they have a transport to pick the troops up, and you need to make sure they don't. From here, it just becomes a gradual process of taking one base, and moving on to the next one. It's always best if you can combine naval air (CAGs) and land-based airpower in a campaign. This comes especially in handy if your aircraft carriers get sunk – then your CAGs don't end up in the drink.

When and if you use armoured forces in amphibious invasions, always combine them with a good proportion of marines to offset the serious assault penalties. They weren't historically used a lot, but there's no reason why you couldn't use paratroops in the Pacific to gain strategic advantage on multi-province islands like New Guinea or the Philippines – combine the attack with an amphibious invasion, unless the Japanese have been careless enough to leave a naval base ungarrisoned.

Just remember that island hopping combat is a lot different from European warfare, and especially since so much of this field of battle is jungle, you don't want to have large numbers of armoured brigades. This is primarily an infantry war.

Don't forget to use submarines! The Japanese have a spaghetti network of convoys going to and from all these little islands. If you can disrupt that net, you're on your way to defeating the garrisons, not to mention starving the Japanese home islands of the foreign resources they went to war to capture in the first place.



## SPANISH CIVIL WAR

No matter when you start playing the Spanish Civil War, and no matter what side you're playing, certain things will remain the same.

It's true that you will need to acquire the enemy's territory in order to win. But perhaps more important is retaining the territory you have. For this reason, the first phase of your war and your research priorities should be built around defensive measures. Infantry is great, but you need quick recruits, and you need them to be able to defend, more than attack, and so for these purposes militia and garrison regiments are great choices. Perhaps cavalry too, for mobility in the mountains. If you do this, research militia techs, but only those techs that improve hard/soft attack or defensiveness (maybe throw in a human wave doctrine, like People's Army, which increases your militia's effectiveness). Research infantry doctrines too, because you have many of those units already, and perhaps should build more once your core territory is secure. You won't have a lot of research points, so stick with a few of these techs, or let them cycle through as you finish them.

When war happens, increase your conscription laws, and go to full economic mobilization. This (the mobilization) is against recommended practice, because you don't have the resources to keep it up on the long term. However, this is an immediate fight to the death – if you don't win, it doesn't matter how many resources you have stockpiled. Smoke 'em if you got 'em! It may mean that when you do win, you won't have sufficient resources to fully join the war. In that case, you may want to cut back your economy once it seems you're winning – pull back on production, for instance, or upgrades, and then become very conservative in your economic operation so that you can prepare for a later war.

Some of your naval units have just lost their home base (probably). Make sure to get them reassigned, so they can get back in supply and be ready to fight again. It's also good to collect them so you can assign them intelligently, rather than just having them floating wherever. Redeploy them when you can so they will be able to intercept the enemy's convoys, or their invasion attempts if it's likely there might be some. Protect your naval bases with destroyer pickets. Go into your production screen and make sure you haven't lost convoys (if a needed convoy hasn't enough ships, maybe they defected – replace them). Before you add convoy



ships, make sure you still own the destination naval base! You'll probably want to reconstruct your HQ structure, but unless you're using AI control you don't need to do this immediately.

Remember you have colonies in north and central Africa, as well as the Canary Islands (Canarias). See who got what in the trade, and what you can do about retaking lands. Make sure to restore any supply lines or convoys that might have gotten cut off. If you've got existing trade agreements, make sure they're coming into friendly ports so you're not supplying the enemy – cancel the agreements, if they are. If you have isolated units dying on islands, see if you can pull them off or otherwise rescue them before they die. This requires a friendly port, so if you don't have one your only option would be an invasion in their support, which may or may not be a wise idea.

You may have to keep a close eye on your IC sliders in the days and weeks after the split, because provinces (and resources) will be changing hands, switching sides.

Most of Spain's army is reserves before the civil war, and so you're going to have to jump straight into full mobilization, and will have to suffer the immense frustration of having a lot of divisions you can't effectively use for a week or two because they're not up to strength. I'll offer a caution on this – make sure you have enough resources to support your level of mobilization so you don't crash your economy in week 1! If you have to take a few weeks getting to 100% mobilization, take it. Because of interventions from fascist countries, the Nationalists will probably have the edge in unit numbers in the early days, so some Republican units



should just go into defensive mode on resources or IC producing provinces, and dig in to hold them off while they try to reinforce. Try to consolidate your forces, if you can.

Your economy should go into reducing dissent (because that's eating away at your economy) and reinforcements. Once the reinforcements are done, split your efforts between upgrades and building new units (put enough into production to build two militia divisions at a time, or whatever it is you're building for short-term defense).

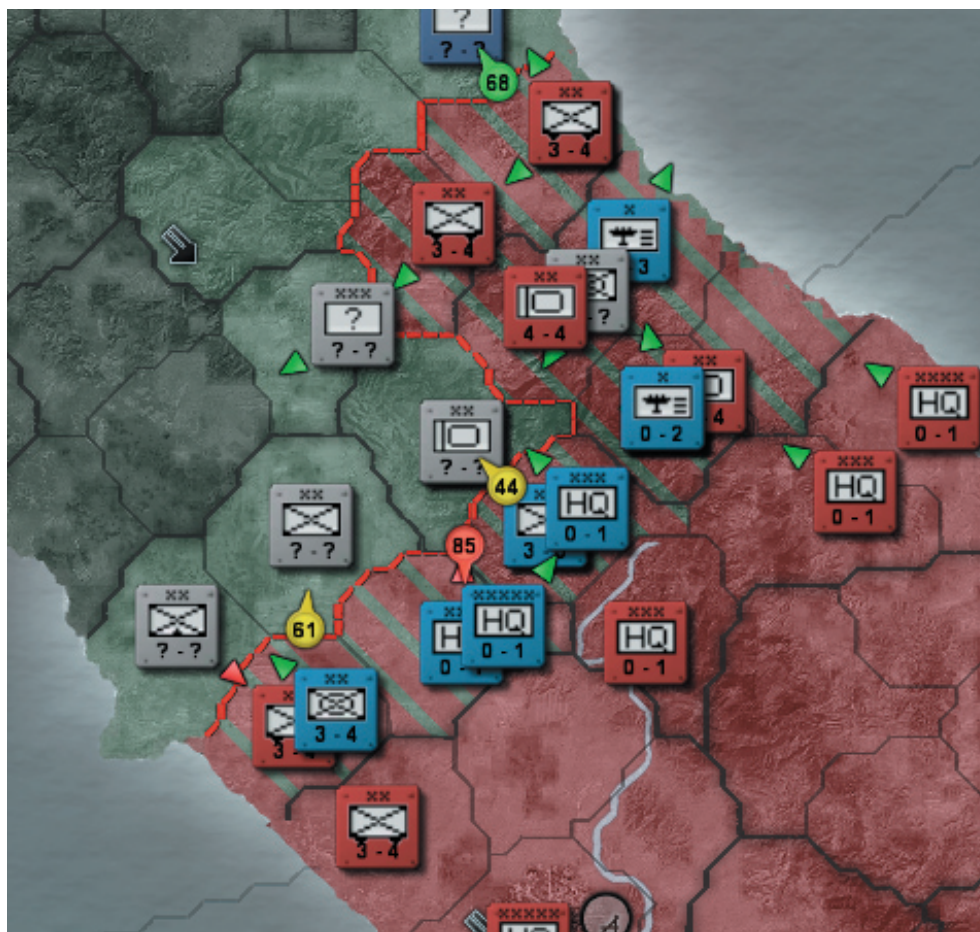
Whoever gets the navy has the advantage of being able to land divisions where they want. Whoever gets the strategic bombers has the serious advantage of being able to destroy the enemy's IC.

If you have a stack of divisions somewhere, which is in combat (like the Republicans probably do in Madrid), see what units are not able to find positions along the front. Pull those units out (retreat them) into a neighboring province where they can do some good against other enemy units.

If you have transports, and one side or the other has a limited number of naval bases connected to its main body of provinces (i.e. it's contiguous with most of the enemy's controlled provinces), consider an amphibious invasion to seize it. The enemy will not be able to operate their economy without a supply of resources or other trade items. This is a warning to the power in the opposite situation – guard your lifeline ports!

For the most part, the rules about not amphibiously invading except into a naval base are suspended – your only rule here should be to only invade where you have controlled provinces adjacent, where supply can get through. You can land away from a naval base and still be in supply.

Once you have an enemy reserve unit isolated from supply early in the game, don't worry so much about defeating him. Just reinforce your own units, build strength, and then go at him again at better odds – he can't receive supply, much less reinforcements, in his situation.



The British and Americans collaborate to implement a classic “turning” movement against the Germans and Fascist Italians north of Roma, Italy. It's hard to do in such confined spaces, but when it can be accomplished it's glorious!

# Small Country Strategies

While there's no way I could present a good, strategic analysis of every small country in the game, and probably don't have time to do a good job on very many of the more popular ones, small countries can be a special challenge, which is why they are often very popular to play.

Certain strategies will be applicable to every small country, while others apply to some and not others. Here is a collection of suggestions which may or may not be helpful for the country you're playing. You'll be able to quickly detect if your country's situation matches well enough to put the strategy into action.

## Offense or Defense? Active or Passive?

In a world war with major countries vying against each other with everything their economies can produce, being a minor can be like being a mouse in the elephant pen. You can stand still and hope no one steps on you, but if you're not positioned where elephants never step, staying put is suicide. Countries who border majors will usually have to watch the situation closely, prepare a military defense, and when the time seems right, pick a side to ally with. There are some blessed countries that may be able to stay at peace. But the rest must take an active role in preparing their defense and taking their own future into their hands. Some countries (many mid-rank powers) have the ability to become aggressive powers themselves, but very few of these can survive long without aligning with one faction or the other. Which faction to ally with becomes the real choice, because whoever you side with, you're going to have to become a cog in their larger war machine.

Partly related to the issue of staying put or having an aggressive defense is whether to build forts or not. Some countries have places which are just naturally fortifiable. Look for these, and if you have such a place – a narrow accessway, or a gap between natural defenses, or a particularly defensible province on the way to one of your major vital centers – then by all means defend it. Other small countries would be wasting their IC building forts, because they're not cheap, and they can usually be avoided by an enemy intent upon defeating you. Denmark, for instance, doesn't have the power to withstand a concerted attack from Germany, no matter what. The Netherlands have such a long border, it would be too expensive, and

while Belgium does have a good defensible location at Eupen where they could (and did) fortify, the success of such a defense assumes the Germans would not invade through the Netherlands or Luxembourg (or France!). The only country in Europe which might have the right combination of factors which could allow them to successfully use an interlocking chain of fortresses is Czechoslovakia, and that's only because they're mostly built at game start, and because they do have a few years to expand the complexes and prepare static defenses. She's got too many aggressive neighbors and too little territory to fight a fluid defense as her primary means of survival, but with a good, stubborn defense in prepared ground, she might conceivably survive.

Don't get locked into a defensive posture, either, even if you're a small country with seemingly little chance against your powerful neighbor. Sometimes, the best thing you can do is make a pre-emptive attack, and surge forward to make battle with the enemy on your terms, where the odds favor you, rather than just waiting for them to attack where they want.

## Small Country Governing

Most laws you could consider for small countries will work by the same reasoning you'd use as a major, because these laws are scaleable. The exception might be Training Laws, where small countries cannot afford the extra building time to add training.

Put most of the leadership you have into research. After your initial trade agreements are set up, if you're confident the deals will stick, you can reduce diplomacy to a trickle to ensure you have at least 3 points to do the next deal. Officers must be kept up on, but you're going to build volumes of new units more slowly than larger countries, so your officer investment can be correspondingly smaller. You probably can't send spies to other countries, but you should keep some (five?) on hand inside your country for self defense. Afterward, you can scale that back and research more.

Your research priorities will be scripted according to the bare-bones recommendations from page 12. Education (to expand leadership), Industrial Production and/or Industrial Efficiency, perhaps Agriculture, perhaps Construction Engineering, and probably your most likely military techs for 1-2 slots. You might throw a doctrine tech in there. Never research anything "ahead of time," as you can't afford the extra cost. As recommended, ignore



air techs. There's every likelihood that if your country was meant to fly, you started with enough air tech to build one or two types, and you should make do with these until you have the increased IC and leadership resources conquest may provide.

There are some "hybrid" powers which have more leadership and IC than the little countries, but still less than a "major" – feel free to mix and match strategies for small countries and strategies for majors to achieve the correct balance. If you can develop light tanks from scratch, and deploy them to your advantage, then by all means do so!

Upgrades and reinforcements should be relatively more important to you than to majors, because you have fewer units and need them all at top efficiency. Besides, why research a tech using your precious and valuable leadership points, and then let your units sit without the benefit of an upgrade? Produce what you can, and live within your means. You may have a wish list five times longer than what you have IC to build at once, but decide what your production priorities are, and work away at it steadily until you have what you need.

You'll have to decide (trial and error may be your best guide) whether to produce supplies internally or trade for them. Your unique set of resource balance – what you produce in great quantities, and what you have shortages of – will help you decide.

## Economic & Industrial Expansion

Part of the reason you're a "minor" is because you don't have the industrial strength to be a major. You can change this, with appropriate concentration and focus on that goal, and if you really want to play a role on the world stage, you're going to need to.

You may have to start by researching the Construction Engineering tech which allows the building of factories. If your country isn't well endowed with infrastructure, you may need to research both. Infrastructure is hard – it takes a lot of attention to really build up, and I'm not sure it helps all that much in HOI 3 unless you're marshaling huge armies (i.e. you need it for supply). Unlike HOI 2, infrastructure doesn't gain you better production of resources. The basic rule is if you need it, build it, if you don't, work on other stuff.

Building factories (IC) takes a lot of attention too – both saps your IC and prevents you from building other things, like an army. Go back to the Strategy Guide's

discussion on "opportunity costs" – if your country has the ability to expand its number of factories, then place as many factories in the production queue as you can without crowding out other more important priorities.

The whole business of which economic law to use is a serious matter to a minor country. I know you want IC **NOW!!!**, but if you mobilize your industry too quickly, you're going to run out of resources. Some countries may have to actually conquer some resource-rich neighbors before they even have the resource richness to expand to Full Mobilization (not to mention War Economy!).

## Factions

To expand on the earlier mention of knowing how to pick a winning faction, this is important. Since factions do not make separate peace, and the whole war is for "all the marbles," you can literally make or break your country according to whether you align with the winner or the loser. This may be easier to do if you choose factions after the war has started, but many countries do not have the option to wait and see. Even if you do, it may still be hard to figure.

But if you're signing on to a faction before world war breaks out, you're signing on to an unknown quantity, and you must fully accept responsibility to play a major role in providing victory for your faction. Start "role-playing" early on, looking for targets, and imagining how you might contribute to either or all major factions before you join any – figure out what you could do to help. This may make your decision of who to join very easy – if you can't help one side, or if it opens you up to warfare with a major you can't handle, maybe it'd be a bad idea to align with that faction! But if you know you have a role to play that could contribute to victory and get your country some conquest at the same time, that's where you should go. Countries do this calculation every year – it's geopolitics, and it's what causes wars and/or alliances to happen. Sometimes countries guess wrong – so can you – so be careful.

Timing is critical too. Your knowledge of history helps in HOI 3, it just can't provide you a day-by-day guide. If you expect one faction will probably, at some point, have a decision to make or an invasion that would put them in conflict with a certain country, you must decide whether that pending event means you should join sooner or later. You're responsible for the actions of your factional allies at any point after you join, so know that

you're willing to accept the consequences. Sometimes, there's something coming which you'll want to wait for, and then you can join the faction afterward. It's going to be different for each faction, and it may be different from one game to the next. Guess right!

## Strategic Targets for Small Countries

If you're short on IC, you should always be on the watch for targets of conquest which would expand your production ability. Devise a plan for taking them, and make that your priority early on. The same goes for resource-producing provinces, though this provides less immediate benefits for you. More resources are always a good thing on the long term.

You have less ability to withstand a foreign invasion than major countries, so keep in mind what strategic targets exist within *your* country too! What is it that your enemy is eyeing? What can you do to defend that area? Defense must always be a priority for small countries, because one good counterstroke against you by an enemy can put you entirely out of the war. You don't have the resilience of a major.

## Militia, Infantry, or Mobile?

Some countries are locked into using just militia, or infantry. Deciding whether to focus on infantry of militia/garrisons is your first big decision, driven primarily by what you have already, and how much IC and/or manpower you have.

If it's all you can afford, garrisons should be your static defensive forces, militia becomes your mobile defensive forces (in place of infantry), and cavalry will be needed for any offensive operations. Obviously, infantry would be a nice addition if you can afford it, because it's best if you don't have to rely only on cavalry for offensives. Neither militia or garrisons should ever be used on offense – they're just made to be killed in that role.

Remember that militia and garrisons are only about half as capable destructively as infantry, and nowhere near as capable on attack, but they are also only about a third as expensive. So you need to "stock up" and really produce enough of these lesser units to make up for it. The next question is how much manpower you have. If you're already low on manpower, you may find that you cannot staff enough militia or garrison units to make up

for the missing infantry. Real, regular infantry is going to be your better choice if you can practically afford it and support them. Even un-upgraded infantry, without your having researched techs to improve their stats, will be preferable to militia or garrisons unless you're fighting entirely defensively.

If you think you can handle producing and deploying infantry sufficient to protect your country, and possibly launch offensive operations with them, then you need to decide whether more is possible – branching out, perhaps, into motorised infantry. Now you must add in the consideration of how much research capability you have. Another important factor is whether you have the ability to produce fuel to sustain a war with mobile units. Because of these things, some countries need to just be satisfied with infantry. Others can research mobilised infantry, and have the IC to produce units they can supply with fuel. Most small countries should not consider mechanised infantry – even majors must examine the costs versus benefits of mechanised. But motorised is definitely worth having if you are able.

Light tanks are sometimes within the reach of minors, but if you don't have the wherewithal to do it right, you shouldn't waste resources going down that tech/IC road. They're expensive, and will monopolize a lot of research time to improve their stats over time. Plus there's the fuel usage. Many countries are actually much better off using infantry, motorised infantry, and even cavalry instead of light tanks.

And that's another economy you should consider. Don't lock yourself into using cavalry if you have the capability to do better, because cavalry will never dominate a modern battlefield. Armoured cars are an alternative that may actually be more within reach and a better utility to a minor country than light tanks. Armoured cars require you to research light tanks first, but they don't carry so much of the added need to support them with upgrades in tech. But whichever you choose, cavalry or armoured cars can fill your need for speed that is so important on a modern battlefield – they become your scouts and your breakthrough units (along with motorised infantry), while your infantry provides support and defense.

If you're fighting other minors, these fast units – cavalry or armoured cars – may even be operating on an open field, because not all minors can maintain a solid front. These very fluid battlefields will almost require a fast scouting unit. Decide whether your army is best with armoured cars or cavalry.



A minor army so equipped is not going to be able to launch an offensive against an armoured major, or on a front where the enemy outnumbers you – just reality. What you should do is watch for opportunities, move your front lines forward when they have an opening, and then dig defensive lines to hold the territory. You'll need to rely upon your faster units to beat back counterattacks long enough to move in your slower units that are better at defense.

One last thing to consider, whether you're using militia, infantry, armoured cars or whatever, is artillery. These brigades offer excellent support punch. Best of all, artillery can move almost as fast as cavalry, and so they won't slow you down very much.

## Air and Naval Forces

Many minors need a navy, no matter what. Some of these countries have an existing navy that's sufficient. Some of them have under-strength navies with light units – screens, not capital ships – and yet might need capitals in a war. Others need a navy, but don't have one yet.

What are you expecting might happen in war? Are you close enough to a major that they might invade your coast? Does the primary major you expect to be at war with have the capability to reach you (i.e. does your ally have naval superiority)? Your nearness to a threat helps you guess (there's no way to really predict) whether they'd be interested in invading or not. And you can expect that if you're nearby them, they may bring their capitals to support the attack.

No minor is probably going to be able to afford a navy to match their major enemies, but depending on who your enemies are, who your allies are, how far away you are from their major fleet units, etc., you may need only one or two capital ships to ward off invasion. That way, they'd have to bring escorts or else lose their invasion fleet, and they may judge it not worth doing. An alternative, against capitals, is to invest in submarines, which could potentially do damage beyond their real size. But you'd need to have free research slots you could commit to perhaps developing them first, and afterward improving their abilities.

Some minors will be limited by their IC capabilities to only having screens – light cruisers and destroyers, or perhaps submarines if you can develop them. This is what's thought to be a “coastal defense force,” and won't be much good beyond that, especially for any kind of of-

fensive work. Fortunately, ships are “low-intensity” IC hogs – they cost a lot in the long run, but they don't require a massive chunk of your IC all at once.

For what it's worth, heavy cruisers may do the work of battleships or battlecruisers, just not as well.

Your aircraft needs also depend on proximity to the enemy (an enemy, any airpower-possessing enemy). What threats do you face? It's sometimes hard to guess what your neighbors might have, several months or years down the road. But what's likely? If you have neighbors nearby with aircraft already, or if they have bases allies could use for their own aircraft, you should consider an interceptor airwing, or more.

Otherwise, you may feel that you “need” a bomber for air support. If you can't afford it, remember that interceptors have some air-to-ground capability themselves, and some countries can make do with just them. But if you think you need some heavier support, check out the research and/or IC needs of a tac bomber airwing. Forget strategic bombers – tac bombers can hit strategic targets too, and there's no reason to seek the specialty of a strategic bomber when you're wondering how to fund other parts of your military buildup.

Some minors just won't be able to afford an air force, especially because aircraft require a lot of IC at once, and if you don't have enough to cover the bill you may see the partial funding stretch out the production date far beyond what it would take a major to build the same unit. Don't get complicated – one or two interceptors, one or two tac airs, and only anything else if you really have some reason or need for them.

## Licensing Production

Minors may find that it's more cost effective to ask an ally for a license for an item you don't have the tech for, rather than spend time researching and then building after you have the tech.

In these cases, your investment must be in terms of relationship first – do what you need to in order to get in the larger country's good graces. In time, ally with them, and or just ask for the license. You should get an idea beforehand whether they'll approve your request, and if they don't you haven't lost anything except the time it takes to figure out how to improve your relations more.

Remember, some countries (many countries) will not license certain critical technologies, even if they have them.

# Modding Files and Games

HOI 3 exists in two types of computer code – part of it's assembler code, which you cannot touch. But many of the files that tell the game how to operate, and how to set up your scenarios is in text files (.txt) or comma-delimited files (.csv) that you can change with a text editor or a spreadsheet editor, respectively.

The important caveat is: do this only **IF** you know what you're doing!

## The Basics

When you look at these files, don't go all "goggle-eyed" – they look complicated if you're not a computer programmer, but it's not as difficult to understand what's going on as you might think. However, it's actually pretty easy to mess something up if you do the wrong thing. Either your file won't work, or it will work in a way that you don't intend. Most of these errors are fixable. There are ways to keep from messing something up.

One important rule is to only use a text editor for working on text files – something like MS Notepad. On occasion, you might be able to get away with using MS Word, or something similar, but usually a full word processing software will insert odd codes into your text automatically which will make your code unreadable, or even change the file type. Notepad and other simple text editors don't add extra code – they're "clean."

If you're trying to edit a .csv file, back it up before you work on it (good practice for .txt files too), because certain versions of spreadsheet editors like MS Excel may try to save the files in a format the game can't read. If it does that, not only won't your changes be working... the game may not either! If you find this has happened to you, just save the backup copy over the one you modified and either use a different editor or be more careful in how the file gets saved.

Anything between quote marks (" ") is a value for a variable. If you see the phrase "=yes" or "=no", in 99% of cases you can change it to the opposite and it will do what you want. In some cases, there will be a third option which you may not know unless you inspect various values for that variable using the search function.

## Settings.txt

In your HOI 3 root directory, you will find a file called Settings.txt. This controls some very basic, but important, ways the game sets up. Most of this is self-explanatory. Change the value before the decimal to increase volumes, for instance. You can change "yes" to "no" to toggle your advanced water or tree or shadow graphics, or to change to sprites instead of counters. You can do all that from the Main Menu in the game, however there is one thing you can only do from this file...

If you change fullscreen=yes to fullscreen=no you will get the game to run in windowed mode, which is not officially supported by Paradox, but in most cases it should work fine.

Be very careful changing some of the more advanced graphics settings, like your "gamma" or "refresh" settings, because I've heard there are certain cases where that can damage a computer monitor – best not to mess with it unless you know what you're doing.

## MessageTypes\_Custom.txt

This is where the game keeps a record of which messages you want handled in what way – which things you want to see in popups, or just in the log, or not at all.

As mentioned in the Manual, the easiest and quickest way to get the right settings for what you want without inspecting and making a decision on each one of 100+ message types is to change the settings here. Use your text editor's "replace" command (if your editor doesn't have that function, you can probably download one that does) to find every instance of "popup=no" to "popup=yes".

That will cause you to be notified of every little thing – you'll know when your division commanders light a cigarette! But this will make for a frustrating first few minutes in the game – a clickfest – where you pause the game and look at each message type, and make individual decisions on how you want the settings to be. But after you've finished that process, it will probably run as smoothly as it can. You'll need to tweak things, here and there, but you'll not be bothered with the most annoying of these popups ever again.



## Defines.txt

Okay, here's where you get into stuff that can really impact (for better or worse!) how the game plays. Many of the values and variables that drive gameplay are located in this file. With great power comes great responsibility – if you break it...

For instance, if you want to have much more volatile election campaigns for democratic countries, you can change the values for “party\_pop\_change\_rate”, “election\_randomness” and “popularity\_randomness”.

## Event Modding

Events are held in a series of files in the Events folder. Each event has a unique ID number, so if you're creating new events, make sure you're using numbers that don't exist elsewhere. Someone on the forum will probably produce a more comprehensive guide to modding new events, and other more complex modding techniques. Here, I only show you how to modify existing events.

If you look at the following event text...

```
# Spanish Civil War - Italian Intervention
country_event = {
    id = 2011
    is_triggered_only = yes

    title = "EVTNAME2011"
    desc = "EVTDESC2007"
    picture = "SCW"

    option = {
        name = "EVTOPTA2007"
        capital_scope = {
            infantry_brigade = current
            infantry_brigade = current
            infantry_brigade = current
        }
    }
}
```

... first notice the brackets, and how there are three sets of brackets, all ended after the rest of the text. Make sure not to change this structure. The “title” and “desc” must all correspond to existing spreadsheet entries in the country's event file and/or “events.csv”.

There is a set of commands you can use for events, and I'm sure the list will be on the Forum somewhere. This set of commands will allow you to add or delete units, change diplomatic relations, cause a war... any of a large number of changes to variables.

## Ministers and Unit Flavor Names

These items can be changed by finding the “common/countries” folder (countries is a folder inside the common folder), where you'll find files for individual countries.

At the top of each country's file, you'll see flavor names for each type of brigade which the game draws from to name each new unit, ship, etc.. You can change these names, or add to them, as you like. In many ways, it may be easier for you just to rename your units in the game, using the unit interface. But this is an option.

Under this is where you would change data, names, etc. for “minister candidates” – your pool of ministers you can choose from. A modder might, for instance, like to add a historical (or imaginary) figure to use in his game, or to back up a story (AAR) idea.

You can add a new minister from scratch, if you like. Just copy the text for an existing minister, find a unique number for him (you'll probably find that the last minister listed in the file uses the number just before the next available one, but to be safe it's probably best to use a number about 20 or 30 larger than the last number used), and fill in the appropriate information to make the minister as you like. If you can find a picture of a historical person you're creating, use a graphics program to reduce it to the correct pixel size to match the files found in “gfx/pictures/portraits” and enter the filename (files should be named using no spaces – “my\_new\_pic” for instance, or “mynewpic”) into the line in your text file saying “picture = \_\_\_\_\_”.

Ministers can be available for more than one job,

```
} 10062 = {
    name = "Tomás, Conde de Redezno"
    ideology = fascistic
    loyalty = 1.00
    picture = M10048
    foreign_minister = iron_fisted_brute
    minister_of_security = prince_of_terror
    start_date = 1936.1.1
} 10063 = {
    name = "Enrique Plá y Deniel"
    ideology = fascistic
    loyalty = 0.75
    picture = M10063
    foreign_minister = ideological_crusader
    minister_of_intelligence = political_specialist
    start_date = 1938.1.1
} 10066 = {
```

Watch out for brackets! Notice the bracket in the upper left is actually ending the file before it. Then, the number on the same line is beginning the next file, named 10062. The brackets open on that same line, and close on the same line as the next file, for minister 10063.

as you see in the example above. If you don't want your guy available for a job that's listed, you can take that line out, or replace it with a job title you want him to be available for. This is an example of when the files are “open ended” – you can add a valid variable for six jobs if you wanted to. Just make sure your syntax matches the others used (i.e. “foreign\_minister” lowercase with an underscore, not “Foreign Minister” or “foreign minister”).

## Modding Provinces

I recommend you modify the provinces inside a savegame file. If someone else wants to recommend differently, that's fine. You can look inside the province\_names.csv file to match the name of a province with its number (the provinces use accent marks, like umlauts, etc. so it may be harder to find some provinces).

When you see a file, there are a series of entries for installations in that province. Every province does not have to have an entry for every type – they only have the line if they have that kind of installation present. If you want to increase the level of an existing installation, just increase the number. If you want to add one that's not there, grab the code from another province.

## Modding Units

Notice how the HQ unit is a detached brigade, and is listed above any of the divisions, armies or corps.

The units shown here (there can be longer lists) include two units directly attached to the “Home Command” theatre – a corps and an army, each of which has two divisions attached to them. All these units are based

```
6120={
  owner="POR"
  controller="POR"
  core="ENG"
  core="IND"
  core="POR"
  air_base={
    1.000 1.000  }
  naval_base={
    2.000 2.000  }
  anti_air={
    1.000 1.000  }
  infra={
    6.000 6.000  }
  points=0
  weather={
    humidity=60.400
    pressure=980.000
    windspeed=0.688
    temperature=15.570
    precipitation=1.000
    cloud_coverage=0.675
  }
}
```

in “location = 1964”, which happens to be London (they could be based in different locations, so each unit has its own “location” line). You can see each leader has a unique ID code – Urquhart is 1300, Maczek is 8075.

```
theatre = {
  name = "Home Command"
  location = 1964
  leader = 1005 #Alanbrooke
  regiment = { type = hq_brigade name = "Home Command HQ" historical_model = 0 }
  corps = {
    name = "I Airborne Corps"
    location = 1964
    leader = 1053 #Browning
    regiment = { type = hq_brigade name = "I Airborne Corps HQ" historical_model = 0 }
    division = {
      name = "1st Airborne Division"
      location = 1964
      leader = 1300 #Urquhart
      regiment = { type = paratrooper_brigade name = "1st Airlanding Brigade" historical_model = 2 }
      regiment = { type = paratrooper_brigade name = "1st Parachute Brigade" historical_model = 2 }
      regiment = { type = paratrooper_brigade name = "4th Parachute Brigade" historical_model = 2 }
    }
    division = {
      expeditionary_owner = POL
      name = "Polish Parachute Brigade"
      location = 1964
      leader = 8131 #Sosabowski
      regiment = { type = paratrooper_brigade name = "Polish Parachute Brigade" historical_model = 2 }
    }
  }
  army = {
    name = "Eastern Command"
    location = 1964
    regiment = { type = hq_brigade name = "Eastern Command HQ" historical_model = 2 }
    division = {
      name = "77th Motorized Infantry Div."
      location = 1964
      regiment = { type = motorized_brigade name = "9th Infantry Brigade" historical_model = 3 }
      regiment = { type = motorized_brigade name = "10th Infantry Brigade" historical_model = 3 }
      regiment = { type = motorized_brigade name = "12th Infantry Brigade" historical_model = 3 }
    }
    division = {
      expeditionary_owner = POL
      name = "1st Armoured Division"
      location = 1964
      leader = 8075 #Maczek
      regiment = { type = armor_brigade name = "10th Armoured Cavalry Brigade" historical_model = 3 }
      regiment = { type = motorized_brigade name = "3rd Rifle Brigade" historical_model = 3 }
    }
  }
}
```



The 2nd division shown – the Polish Parachute Brigade – you can see is actually a “detached brigade,” even though it’s organized as a division. The 1st Airborne Division (above it), has 3 brigades attached.

One of the ways you can use this file to change your “order of battle” (OOB) is to change existing brigades or add new units of any type (though probably not theatres – I don’t know how the computer would handle that). If you want that 3rd Rifle Brigade at the bottom of the image to be a tank destroyer brigade instead of motorised, just change the type to “tank\_destroyer\_brigade” and you’re set!

Remember that you don’t actually want to change the composition of the paratrooper divisions, because they should normally be kept just to paratroop brigades. Otherwise they’ll have to detach the other brigades before they can board a plane.

Another example of the “open ended” nature of these files. These units don’t show it, but if any of them were reserve divisions, they’d have a line underneath the division’s location reading “is\_reserve = yes”. Also notice the army, Eastern Command, does not have a leader assigned. That means one will be selected for the unit by the AI if you have that option set.

Remember when you click on the “need” button for a slider in production, it changes all the other values that are not locked. So if you started the game with the right amount for a value, and you didn’t lock it, you may suddenly find you’re spending twice as much as you wanted on something else.

When deploying units to the correct province, remember province names can be looked up inside the localisation folder, in the spreadsheet called “province\_names”. Do a search for the province name or province number you’re looking for, and make whatever changes you need to in the unit assignment.

Remember that if you’re trying to change the “type” of a unit – say, from infantry to armour – that you can’t just change the model type. You have to change the rest of the information for the unit too. In the screenshot (belowskx kcd ) you’ll notice I’m replacing the infantry regiments (brigades) with armoured. But the infantry brigades required information on small arms tech and anti-tank tech to determine what model it was. Armour’s required techs are different, and you’ll need to copy that over.

Often, it’s easiest to find another unit in your army (or someone else’s) which matches the type you

want, and copy their information so you can paste it over the old unit’s information. Don’t carry over unit names or especially the unit’s number (you may want to change the name if you’re changing unit type, but the unit number needs to remain the same). If you’re adding a brigade where one did not exist before, the unit number (“id”) needs to be something no one else is using. Maybe choose numbers at the upper range of what you’re already using as unit ids – 5899 for instance, instead of 5802.

Unit is classified "Infantry Model 1" but has upgraded by 8.80% toward "Infantry Model 2"

Unit has max Org of 45, but is currently operating at 35

Lvl 1 Tech = INF 2 Model

## Modding Spy Actions

There are times when, for a specific purpose, you might want to change your ability to lower your neutrality. Obviously, this enables you to declare war sooner than you could otherwise. Keep in mind the game values are set where they are for good reasons – lots of testing has determined a good “balance” for these values, so they can’t be misused. But if you’ve got a good enough reason, it should be okay to change this value.

Inside the “common” folder is a file called “static\_modifiers” and toward the end of that file is a list of espionage modifiers. If you change the value of “spy\_lower\_neutrality” so it is higher (a higher negative value) then you should be able to reduce your neutrality more quickly with your spies.

There are values you can modify in the “defines.txt” file (inside the “common” folder) which will change other aspects of spying. Again, think before you change things – there was a lot of thought put into setting the values where they are in the approved game patch. By changing them, you may see widespread effects you didn’t expect!

## Looking For Errors

If your file isn't working, or if it's not working as expected, you may have made a mistake. Common mistakes include...

You may have missed a digit – 100 instead of 10.

You may have the wrong syntax, accidentally putting something inside a bracket “{” instead of outside, or vice versa. As a rule, every set of brackets “{}” contains something. There's never a leftover bracket. If there is, something is wrong. Don't just delete one if you find it in the wrong place, unless you know you placed it there by accident. More likely, you've accidentally deleted one of them, or you've placed your inserted text inside instead of outside the brackets, which moves the missing bracket to a place where you don't expect it (i.e. you'd see an extra bracket somewhere it's not supposed to be).

For instance, consider this snippet from the Settings.txt file:

```
mapRenderingOptions={
renderTrees=yes
onmap=yes
simpleWater=no
alwaysCounters=yes
}
lastplayer="Player"
```

The variable set is called “mapRenderingOptions.” You can set the various graphic rendering options, which are kept within the brackets. Anything after the brackets exists as a separate variable, on the same level as the first.

If the tabs (the spacing) don't line up with other

files, or with what was there before, it's not a big deal. Tabs and spacing is not important. The brackets “{}” are what's important, and sometimes “carriage returns” (hitting the “return” or “enter” key). If there are more lines, or less, in what you just modded than was there before, that's okay too. The game system pays attention to the information that's there, not what's not there. For the most part, you should be safe having missing information.

## Conclusion

Don't get cocky! Just when you think you know something about modding, you'll leave a bracket off, or you'll have a duplicate unit number, or you'll leave out something that really can't be left off the file you're working on, and it'll crash when you try to run it (or when the computer is asked to access the information).

There are a lot of other things you can change through user-moddable files. If you know something you want to change (like the values attached to battle events, for instance), look for a folder where those files might be kept, and just poke around to find the right one. Many of the more “global” things (i.e. things that affect the whole game, not just one country, or person, or unit, etc.) are in files inside the “common” folder.

Please keep in mind, these tips just scratch the surface when it comes to modding. Full-scale modders will need to talk to other modders and figure out a lot more than what's here in order to accomplish what they need to do. This is designed primarily for those players who want to make a few tweaks to their files for purposes of “after action reports” or just to aid in enjoying their games.



# Multiplayer Games

As complex and accurate as Artificial Intelligence can be at times, there is nothing yet that can approximate the insight and cunning present in a human opponent. If players get bored with playing against the computer, or if they want to sharpen their skills against a more challenging opponent, players often turn to multiplayer games, which are facilitated by Paradox Interactive using the Metaserver, which will help players find opponents, or through private setups arranged with other players.

MP groups often run at relatively high speed, and with minimal pausing. They often have “house rules” which keep the experienced players from becoming annoyed, but which new players may find daunting. You should probably check in on the Multiplayer forum (at the Paradox Forum) and ask for advice before getting involved, just so you know the ropes.

## What To Expect

Because of the speed and (non)pausing issues, MP games are going to be fast-paced. You’ll have to remember what you’re doing, plan ahead, and react to things, all at the same time while “the unexpected” hits you from all sides! Because of this, you may find it useful to prepare by playing games against the AI at high speed without pausing. Get used to the concept.

After you’ve prepared for the fast pace, you need to realize that human beings do not act or react the way the computer’s intelligence does. The AI is using a set of algorithms and instructions to try to emulate human thought imperfectly. A human player doesn’t have to pretend!

Therefore, expect a lot of cunning and deception to be on display in your multiplayer games. Expect the enemy to feel out your vulnerabilities, and to take advantage of them. Expect them to figure out what you would never expect, and then to do it! Be paranoid – you’re probably right, they are out to get you!

## Diplomacy

One major difference in MP games is that your diplomacy is being conducted with real people, and it can be either “on the map” using regular game interactions, or can be through the MP chat function, allowing you to set

secret arrangements that won’t be visible to others in the game (there may be house rules about this, too). Keep in mind that this also makes it more possible to backstab opponents! With the faction setup, there won’t be a lot of opportunities to backstab once the war starts, but during “peacetime” there will be lots of maneuvering, promises and broken promises.

I can tell you right now that the three most determinant factors (because they will be overlooked in the midst of it all) in MP will be:

a) naval patrolling of coasts

Failing to guard the coast around the UK will be deadly – and while the AI could be decent with that, players sometimes forget.

b) use of “zones” to air intercept

A player will often change tactical and strategical targets so to avoid other players interceptors. There aren’t penalties for rebasing ... so while you may attack from France one day, you may then come from Norway’s way the next. To defend with that you need to set interceptors on air intercept missions that cover a larger area than the two left-most buttons: but when you do so you need to make sure several squadrons of interceptors don’t overlap, because if they do, you’re allowing the other player to concentrate elsewhere and just distract your own (high stack penalty) interceptors.

c) army hierarchy and distance management

– Silktrader (Carlo Giuseppe, Paris France)

## Other Advice & Warnings

Mistakes made in MP will be unlikely to go unnoticed. If you leave an opening, your opponents will take advantage. You’ll still have plenty of AI opponents – every country not played by a human will be AI, so there will be some carryover of expectations from regular play.

It’s possible for one multiplayer participant to be effectively embargoed and “locked out” of trade by a consensus of the other players. This is an alliance and balance of power consideration – it’s not “unethical,” but it’s not likely to engender favorable relations, either in the game or outside it! It’s worthwhile, though, to remember that it can happen, and if it does, you could quickly be forced to either curtail your economy to avoid using the resource

in shortest supply, or to go to war in order to conquer a source.

You need to learn not to be offended easily. The computer AI never gets upset, but real players often do, and you'll probably encounter a wide range of personality types if you play with many people. If someone thinks you're being annoying, pay attention – maybe they're right! You don't want to get a reputation as a hard guy to play with. If someone gets hot and starts accusing players of this or that, either avoid them or try to work through the issues with them. Sometimes (often?) the people you're playing with will lie to you, for advantage. Deal with it – it's part of real-life politics and war, so it's part of MP too. Just remember your reputation, for honor or for lying, will carry over from one game into the next.

Your job, in Multiplayer, is to catch your opponents where they least expect it, and to crush them. That's your opponents' job too. Sometimes there will be hard feelings – learn to get through that!

On the other hand, you can ask most players (esp. in the Forum) for help, and they'll be more than willing to help out a new player. The Multiplayer forum will be a great source for advice. As with the Modding chapter, you should know your best advice will come from the Forum, not from this guide.

Enjoy!